

Guidance on Labelling and Packaging in accordance with Regulation (EC) No 1272/2008



For manufacturers, importers,
downstream users and distributors of
substances and mixtures

LEGAL NOTICE

This document contains guidance on the labelling and packaging requirements under Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation).

The users are reminded that the text of the CLP Regulation is the only authentic legal reference and that the information in this document does not constitute legal advice. The European Chemicals Agency does not accept any liability with regard to the contents of this document.

Guidance on Labelling and Packaging under the CLP Regulation

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Preamble

This document is addressed to manufacturers, importers, downstream users and distributors of chemical substances and mixtures. It provides guidance on the labelling and packaging rules for substances and mixtures as set out in Titles III and IV of Regulation (EC) No 1272/2008 (CLP Regulation) which entered into force on 20 January 2009. The document also includes relevant changes from the 2nd Adaptation to Technical Progress (ATP) to the CLP Regulation.

The new guidance document goes beyond the relevant sections on CLP hazard labelling as presented in the Introductory Guidance on the CLP Regulation and the Guidance on the Application of the CLP Criteria, as it further specifies and explains the application and arrangement of the CLP label elements for substances and mixtures. Its content replaces Part 5 (Labelling) and Annex V (Selection of precautionary statements) of the Guidance on the Application of the CLP Criteria.

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1. INTRODUCTION

1.1 Who should read this document?

This document is relevant for suppliers of chemical substances and mixtures, namely for

- manufacturers and importers of substances,
- importers of mixtures,
- downstream users of substances and mixtures (including formulators),
- distributors of substances and mixtures, including retailers.

These suppliers must label and package their substances and mixtures in accordance with the provisions of Regulation (EC) No 1272/2008 (CLP Regulation or CLP) before they are placed on the EU market.

1.2 What is in this document?

This document provides guidance on the labelling and packaging requirements set out in the CLP Regulation. It builds on the overview provided in sections 14 to 16 of the Introductory Guidance on the CLP Regulation as already published on the website of the European Chemicals Agency (ECHA or Agency), see http://guidance.echa.europa.eu/docs/guidance_document/clp_en.htm.

In particular, this guidance aims to clarify:

- what aspects to consider when estimating **the label size** needed;
- what types of **supplemental information** are possible, and where to place this information on the label, see [section 4.8](#) below;
- the conditions for **small packaging exemptions**;
- the interaction between **CLP and the transport labelling rules**;
- how to select the most appropriate set of **precautionary statements** for the label.

Examples illustrating these topics are provided in [sections 6](#) and [section 7](#) of this guidance document.

2. GENERAL OVERVIEW

2.1 Legal background

Regulation (EC) No 1272/2008 (CLP Regulation or CLP) is the new EU legislation on classification, labelling and packaging of substances and mixtures. It entered into force on 20 January 2009 in the European Union¹ and it is directly applicable to suppliers who manufacture, import, use or distribute chemical substances and mixtures. The new Regulation will replace the provisions of the Dangerous Substances Directive 67/548/EEC (DSD) and the Dangerous Preparations Directive 1999/45/EC (DPD) in a stepwise approach; the latter directives will finally be repealed on 1 June 2015.

CLP introduces several new aspects to the labelling and packaging of substances and mixtures. This guidance will explain the new labelling and packaging rules of CLP and the challenges they bring, and will illustrate with some examples how labels could be laid out.

In general, the CLP label shall display the label elements which are taken over from the United Nations Globally Harmonized System of classification and labelling of chemicals (UN GHS), i.e. the new pictograms, signal word, hazard and precautionary statements, in order to reflect the assigned classifications of a substance or mixture. At the same time CLP retains some of the existing labelling concepts of DSD and DPD, such as the small packaging exemptions. In order to accommodate certain hazard information from DSD which is not (yet) covered by the UN GHS as well as further label elements which are required by other Community Legislation, CLP introduces the concept of “supplemental information” for the label. This is in line with the provisions of the UN GHS (see point 1.4.6.3 of the UN GHS).

Title III of CLP introduces *‘Hazard Communication in the form of labelling’*. This wording is to indicate that CLP covers only one aspect of hazard communication, namely the hazard label. Another key element of hazard communication is the Safety Data Sheet whose general format and content are set out in Article 31 and in Annex II to Regulation (EC) No 1907/2006 (REACH). It should be noted that Annex II to REACH has recently been adapted through Commission Regulation (EU) No 453/2010, in order to incorporate the Safety Data Sheet rules set out in the UN GHS, see

<http://eur-lex.europa.eu/JOIndex.do?year=2010&serie=L&textfield2=133&Submit=Search&ihtmlang=en>

Article 31 of the REACH Regulation, as amended by CLP Article 57(2), sets out in which situations the CLP-related information has to be provided in Safety Data Sheets for substances and mixtures.

The Agency is currently preparing a separate guidance document on the compilation of Safety Data Sheets; for the current draft see http://guidance.echa.europa.eu/guidance4_en.htm

¹ Once the EFTA States that are signatories to the EEA Agreement (these are currently Iceland, Liechtenstein and Norway) have incorporated the CLP Regulation into their national legislation, references in this document to ‘the EU’ and ‘the Member States’ should be read to include the corresponding countries.

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2.2 Scope of labelling and packaging under the CLP Regulation

In general, substances and mixtures that are placed on the market are supplied in packaging with the necessary labelling information. A substance or mixture contained in packaging has to be labelled according to the CLP rules where

- the substance or mixture is classified as hazardous;
- a mixture, even if not classified as hazardous, is addressed in Part 2 of Annex II to CLP. In this case the supplemental label elements as set out in that part shall be applied.

In addition, an explosive article which meets the criteria as described in Part 2.1 of Annex I to CLP will need to be labelled according to the CLP rules. Other articles do not need to be labelled under the CLP Regulation; for a clarification what is considered to be an article see also the Guidance on requirements on substances in articles on the Agency's website (http://guidance.echa.europa.eu/guidance_en.htm)

Substances and mixtures within the scope of Directive 91/414/EEC² (plant protection products Directive) or Directive 98/8/EC (biocidal products Directive) have to carry CLP labelling elements as appropriate; substances and mixtures within the scope of the former also need to display the supplemental statement EU401, see CLP Article 25(2). On the other hand, the labelling provisions of these acts remain fully applicable to any product within their scope, see Recital 47 of the CLP Regulation. For example, there are separate provisions for updating labels for such substances and mixtures in these acts, and their suppliers must apply these provisions instead of the CLP rules, see also CLP Article 30(3). Another deviation from CLP is that different rules apply as to which information may be presented in form of a leaflet as an alternative way to accommodate the required labelling information, see also [section 5.3.1.1](#) of this document.

Certain substances and mixtures may also be supplied to the general public without packaging in which case a copy of the label elements is required to accompany the substance or mixture, for example on an invoice, see CLP Article 29(3) and Part 5 of Annex II to CLP. Currently this only applies to ready mixed cement and concrete in the wet state, see also [section 5.3.2.2](#) below.

Finally, CLP Article 23 and section 1.3 of Annex I to CLP define derogations from the CLP labelling requirements for special cases and the conditions under which these derogations apply. They define either the application of selected labelling elements or even allow the omission of CLP labelling. The special cases include

- Transportable gas cylinders, see the specifications set out in point 1.3.1 of Annex I to CLP;
- Gas containers intended for propane, butane or liquefied petroleum gas, see the specifications set out in point 1.3.2 of Annex I to CLP;

² With effect from 14 June 2011, Directive 91/414/EEC is repealed by Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market. References to the repealed Directive shall then be construed as references to the new Regulation. Nevertheless, Article 80 of Regulation (EC) No 1107/2009 specifies that Directive 91/414/EEC shall continue to apply with respect to active substances included in Annex I to that Directive for certain transitional periods. Furthermore, it specifies that products labelled in accordance with Article 16 of Directive 91/414/EEC may continue to be placed on the market until 14 June 2015.

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- Aerosols and containers fitted with a sealed spray attachment and containing substances and mixtures classified as presenting an aspiration hazard, see the specifications set out in point 1.3.3 of Annex I to CLP;
- Metals in massive form, alloys, mixtures containing polymers, mixtures containing elastomers, see the specifications set out in point 1.3.4 of Annex I to CLP;
- Explosives, as referred to in section 2.1 of Annex I to CLP which are placed on the market with a view to obtaining an explosive or pyrotechnic effect, see the specifications set out in point 1.3.5 of Annex I to CLP.

In relation to the afore-mentioned special cases, further guidance is not provided in this document as the explanations given in section 1.3 of Annex I to CLP are considered to be sufficient.

2.3 Timelines for classification, labelling, packaging and updating of CLP hazard labels

The CLP Regulation sets out a phased transitional period during which the rules of both CLP and the previous legislation on classification, labelling and packaging, i.e. the DSD and DPD directives, are applicable in parallel. In relation to classification, labelling and packaging, CLP sets out different timelines for substances and mixtures. This is to give companies time to migrate from the DSD/DPD system to the CLP rules. However, they have been allowed to apply CLP in full on a voluntary basis since its entry into force, see CLP Article 61.

For substances, the deadline for classification, labelling and packaging according to the CLP rules was 1 December 2010. Nevertheless, substances still need to also be classified according to DSD until 1 June 2015. Substance classifications according to DSD are necessary to allow mixture classification according to DPD to be continued until mixtures themselves are classified according to CLP; these DSD classifications have to be indicated in the Safety Data Sheet (in sub-section 2.1) until 1 June 2015. Where a substance was already classified, labelled and packaged according to the DSD rules and placed on the market before 1 December 2010, i.e. it is already in the supply chain by that date, the manufacturer, importer or distributor may postpone its re-labelling and re-packaging according to the CLP rules until 1 December 2012. This means that the substance can be sold further in the supply chain with the DSD label until 1 December 2012. However, in cases where a substance is re-filled into another packaging on its way through the supply chain and the respective supplier (re-filler) changes the packaging such that other labelling elements become necessary, he must adapt the label to the CLP requirements and no longer use the DSD labelling as far as the relevant CLP classifications are made available to him, e.g. through a Safety Data Sheet.

For mixtures, the deadline for classification, labelling and packaging according to the CLP rules is 1 June 2015. Until then, they need to be classified, labelled and packaged according to DPD. In cases where a mixture has already been classified, labelled and packaged according to CLP before 1 June 2015, only the CLP label shall appear, and not the label according to DPD. Where a mixture is already classified, labelled and packaged according to the DPD rules and placed on the market before 1 June 2015, i.e. it is already in the supply chain by that date, the manufacturer, importer, downstream user or distributor may postpone its re-labelling and re-packaging according to the CLP rules until 1 June 2017. This means that the mixture can be sold further in the supply chain with the DPD label until 1 June 2017. However, in cases where a mixture is re-filled into another packaging on its way through the supply chain and the respective supplier (re-filler) changes the packaging such that other labelling elements become

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necessary, he must adapt the label to the CLP requirements and no longer use the DPD labelling as far as the relevant CLP classifications are made available to him, e.g. through a Safety Data Sheet.

An overview of the relevant timelines for classification and labelling is provided in Figure 1 below:

	Legislation	From 20 January 2009	From 1 December 2010	From 1 June 2015
Substances	Directive 67/548/EEC (DSD)	Classification required		Repealed
		Labelling required (if not CLP labelled)	No labelling unless the derogation applies	
	Regulation EC No 1272/2008 (CLP)	Classification possible	Classification required	
		Labelling possible	Labelling required unless the 2012 derogation applies	
Mixtures	1999/45/EC (DPD)	Classification required		Repealed
		Labelling required (if not CLP labelled)		
	Regulation EC No 1272/2008 (CLP)	Classification possible		Classification required
		Labelling possible		Labelling required unless the 2017 derogation applies

Figure 1: Timelines for classification and labelling in accordance with CLP and DSD/DPD

CLP Article 30 requires a supplier to update any information on the label without undue delay, i.e. as soon as reasonably practicable, following any changes to the classification and labelling where the revised classification is more severe or where new supplemental label elements are required under CLP Article 25(1) and (2). However, there are separate provisions for updating labels in Directive 98/8/EC (biocidal products Directive) and Directive 91/414/EEC³ (plant protection products Directive), and suppliers of substances or mixtures within the scope of these acts must apply these provisions instead.

Where other changes to the label are involved, e.g. where the revised classification will be less severe or the contact details of the supplier have changed, the supplier has 18 months to update the label. In cases where a less severe harmonised classification arises from an

³ With effect from 14 June 2011, Directive 91/414/EEC is repealed by Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market. References to the repealed Directive shall then be construed as references to the new Regulation. Nevertheless, Article 80 of Regulation (EC) No 1107/2009 specifies that Directive 91/414/EEC shall continue to apply with respect to active substances included in Annex I to that Directive for certain transitional periods. Furthermore, it specifies that products labelled in accordance with Article 16 of Directive 91/414/EEC may continue to be placed on the market until 14 June 2015.

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Adaptation to Technical Progress (ATP) to the CLP Regulation, the 18 months delay for changing the label counts from the day of the entry into force of the relevant ATP.

Further label changes to be implemented within 18 months would include the update of labelling information for certain mixtures not classified as hazardous but for which special rules for supplemental labelling in accordance with Part 2 of Annex II to CLP apply.

3. PRINCIPAL REQUIREMENTS OF LABELLING AND PACKAGING IN ACCORDANCE WITH THE CLP REGULATION

3.1 General labelling rules

General and specific rules regarding the content and application of a CLP label are set out in CLP Title III, Chapters 1 and 2, respectively.

As a general rule, CLP requires labels to be firmly affixed to one or more surfaces of the packaging immediately containing the substance or mixture and that they shall be readable horizontally when the package is set down normally, see CLP Article 31(1). The label elements themselves, in particular the hazard pictograms, shall stand out clearly from the background, see CLP Article 31(2) and (3). Furthermore, all label elements shall be of such size and spacing as to be easily read. A physical label is not required when the label elements are shown clearly on the packaging itself, see CLP Article 31(5).

3.2 Elements of the CLP hazard label

According to CLP Article 17, a substance and mixture classified as hazardous must bear a label including the following elements:

- Name, address and telephone number of the supplier(s);
- The nominal quantity of the substance or mixture in the package where this is being made available to the general public, unless this quantity is specified elsewhere on the package;
- Product identifiers;
- Hazard pictograms, where applicable;
- The relevant signal word, where applicable;
- Hazard statements, where applicable;
- Appropriate precautionary statements where applicable;
- A section for supplemental information, where applicable.

It should be noted that for particular label elements precedence rules apply. These rules are further explained in the sections below.

CLP requires the label to be written in the official language or languages of the Member State(s) where the substance or mixture is placed on the market, unless the Member State(s) concerned provide otherwise. Suppliers may accomplish this either by producing a single multi-language label covering all the official languages in countries where the substance or mixture is

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supplied, or by producing separate labels for each country, each with the appropriate language or languages. Suppliers may use additional languages to those required on their labels if they wish, provided that the same details appear in all languages. However, this should not impact the legibility of the obligatory labelling information nor can it trigger exemptions from the labelling requirements as set out under CLP Article 29, see [section 5.3.1](#) of this document.

3.3 Location of information on the CLP hazard label

CLP Article 32 provides some limited rules that define the location of information on the label. However, further details as to how label elements are arranged are left to the discretion of the person(s) responsible for compiling the label, as outlined in Table 1 below:

Table 1: CLP labelling requirements versus discretion of the supplier

CLP requirement (Article 32)	Example of decision left to the discretion of the supplier
The hazard pictograms, signal word, hazard statements and precautionary statements shall be kept together on the label.	The supplier is free to choose the arrangement of the pictograms.
Hazard statements shall be grouped together on the label while the order of the hazard statements can be chosen freely.	The supplier may choose whether these groups are to be presented on the left, on the right or elsewhere on the label.
Precautionary statements shall be grouped together on the label while the order of the precautionary statements can be chosen freely.	The supplier may choose whether these groups are to be presented on the left, on the right or elsewhere on the label.
In case more than one language is used on the label, the hazard and precautionary statements of the same language shall be grouped together on the label.	Where the supplier needs to use alternative means to meet the requirements of CLP Article 31 in relation to the language(s) required in a particular Member State, he may choose whether to accomplish this using fold-out labels, tie-on tags or on an outer packaging, in accordance with section 1.5.1 of Annex I
Any supplemental information as referred to in CLP Article 25 shall be included in the section for supplemental labelling and placed alongside the label elements referred to in CLP Article 17(1)(a)–(g).	The supplier may choose how to visibly separate this section from the section containing the label elements referred to in CLP Article 17(1)(a)–(g). He may also decide to place this information in more than one location on the label.

3.4 First experiences with the CLP labelling rules

First experiences with the application of the CLP labelling rules suggest that the information required on the CLP label will increase compared to the DSD/DPD regime, requiring further space on the label. One reason for this is that additional pictograms are required under CLP, compared to DSD/DPD. Similarly, the new signal word will consume additional space. Where

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mixtures have to be classified on the basis of the calculation methods, lower generic concentration limits trigger additional classification and labelling compared to DSD/DPD, which means that further hazard and precautionary statements must be put on the label. Moreover, combined hazard statements that would condense the message and save valuable label space are normally not foreseen under CLP, see [section 4.5](#) of this document.

In relation to precautionary statements, CLP provides for far more precautionary statements compared to the number of safety phrases that are available under DSD/DPD. On the other hand, less prescriptive selection rules under CLP compared to DSD make it more difficult to arrive at the target number of six precautionary statements on the label as intended by CLP, see also [section 4.6](#) and [section 7](#) of this document.

For illustration purposes Figure 2 below shows a comparison of main label elements⁴ under CLP and DSD for an example substance (glutaraldehyde):



<u>Hazard pictograms under CLP</u>	<u>Danger symbols under DSD</u>
	
Signal word: Danger	Indications of danger: Toxic Dangerous for the environment
5 Hazard statements under CLP Toxic if swallowed or if inhaled ⁵ Causes severe skin burns and eye damage May cause an allergic skin reaction May cause allergy or asthma symptoms or breathing difficulties if inhaled Very toxic to aquatic life	4 Risk phrases under DSD Toxic by inhalation and if swallowed Causes burns May cause sensitisation by inhalation and by skin contact Very toxic to aquatic organisms
Selection from ca. 30 precautionary statements	S: (1/2-)26-36/37/39-45-61

Figure 2: Comparison of important label elements under CLP and DSD for an example substance (glutaraldehyde)

⁴ Figure 2 is not intended to be a label that complies with the provisions of the CLP Regulation, but is meant to present a rough overview of applicable label elements only.

⁵ This combined hazard statement is one of the few that are foreseen under the 2nd ATP to CLP.

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The example above suggests that in future, optimum use of the available space on the label may be a greater challenge than was/is the case under the DSD/DPD labelling regime. Under CLP, further layout efforts will probably be necessary, in order to accommodate all required CLP labelling elements.

3.5 CLP rules on packaging of substances and mixtures

CLP Article 35 includes the packaging requirements carried forward from the DSD/DPD. In addition to the labelling rules, they need to be considered carefully when a packaging contains a hazardous substance or mixture. These provisions are to ensure that

- the packaging is designed, constructed and fastened so that the contents cannot escape;
- the materials of the packaging and fastening are not damaged by the contents and are not liable to form hazardous compounds with the contents;
- the packaging and fastenings are strong and solid throughout to ensure that they will not loosen;
- packaging fitted with replaceable fastening devices is designed to be refastened repeatedly without the contents escaping;
- the packaging does not attract or arouse the curiosity of children or mislead the consumer when supplied to the general public.

It should be noted that packaging meeting the transport rules is deemed to comply with the requirements set out in the bullet points above.

For substances and mixtures to be supplied to the general public, CLP sets out rules for

- the use of child-resistant fastening (CRF), see section 3.1 of Annex II, and for
- the use of tactile warnings of danger (TWD), see section 3.2 of Annex II.

These provisions are triggered by either a specific hazard class/category or by the concentration of specific substances contained in other substances or in mixtures, see Tables 2 and 3 on the next pages. For both CRF (also sometimes referred to as child-resistant closure – CRC) and TWD, CLP requires conformity with certain standards, relating to reclosable and non-reclosable packaging and to tactile warning devices. These standards are explicitly mentioned in Part 3 of Annex II to CLP. Conformity with these standards may only be certified by laboratories which conform to EN ISO/IEC 17025 as amended.

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Table 2: The hazard classifications that trigger the CLP provisions for child-resistant fastenings and/or tactile warnings

Hazard Class (Category)	Child-resistant Fastenings	Tactile Warnings*
Acute toxicity (category 1 to 3)	✓	✓
Acute toxicity (category 4)		✓
STOT-SE (category 1)	✓	✓
STOT-SE (category 2)		✓
STOT-RE (category 1)	✓	✓
STOT-RE (category 2)		✓
Skin corrosion (category 1A, 1B and 1C)	✓	✓
Respiratory sensitisation (category 1)		✓
Aspiration hazard (category 1) <i>Note that a CRF is not required if the substance or mixture is supplied in an aerosol dispenser or in a container with sealed spray attachment</i>	✓	✓
Germ cell mutagenicity (category 2)		✓
Carcinogenicity (category 2)		✓
Reproductive toxicity (category 2)		✓
Flammable gases (category 1 and 2)		✓
Flammable liquids (category 1 and 2)		✓
Flammable solids (category 1 and 2)		✓

* Note that the TWD provisions do not apply to aerosols which are only classified and labelled as extremely flammable or flammable aerosols.

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Table 3: Substances that trigger the CLP provisions for child-resistant fastenings and/or tactile warnings when they are contained in other substances or in mixtures at or above the denoted concentration

Identification of the substance	Concentration limit	Child-resistant Fastenings	Tactile Warnings
Methanol*	≥ 3%	✓	
Dichloromethane	≥ 1%	✓	

* It should be noted that above a certain concentration, methanol mixtures also need a tactile warning because the mixture would then have to be classified as flammable liquid, cat. 2.

4. RULES FOR THE APPLICATION OF THE CLP LABEL ELEMENTS

4.1 Contact details of the supplier

According to CLP Article 17, the contact details of one or several suppliers must be included on the label. In principle, there can be more than one supplier of the same substance or mixture in the supply chain, e.g. in case a mixture has been supplied by the formulator to a distributor who would supply it to third parties as well. However, CLP Article 17 does not specify whether the contact details of both suppliers are needed in such cases. Nor does it specify whether the contact details of one particular supplier have precedence.

Pursuant to CLP Article 4(4), a supplier shall ensure that a hazardous substance or mixture is labelled and packaged in accordance with Titles III and IV of the CLP Regulation before he places it on the market. On the way through the supply chain the labelling for the same substance or mixture may vary depending upon the volume of the packaging or as a consequence of further layers of packaging, see also [section 5.2](#), [section 5.3](#) and [section 5.4](#) of this document. Where a supplier changes the packaging such that the label elements set out in CLP Article 17 have to be displayed differently than on the label/packaging supplied to him, he should add his own name and contact information or replace the contact information of his supplier with his own contact details since he has thereby taken the responsibility for re-packaging and re-labelling the substance or mixture. Where he does not change the packaging such that changes to the labelling become necessary, he does not need to add his contact details to the label nor replace the contact information of his supplier with his own contact details, but may do so if he wishes to. In case he changes the language(s) displayed on a label, he should add his contact details to the contact details of the relevant supplier who issued the original label, as he is then responsible for the correct translation of the label content.

4.2 Product identifiers

As a general rule, the same product identifier(s) as selected for the label must be used in the SDS for a substance or mixture. Any product identifiers selected for the label shall be written in the official language(s) of the Member State(s) where the substance or mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise, see CLP Article 17(2).

According to CLP Article 18(2), product identifiers for substances shall include at least:

- a name and an identification number as given in Part 3 of Annex VI to CLP. The name is the International Chemical Identification that is stated in column 2 of the tables in Part 3 of Annex VI to CLP. The identification number is typically the Index number, the EC number or the CAS number. It is recommended to use the number that warrants an unambiguous identification of the substance; in some cases it may be warranted to use two numbers, e.g. the CAS and the Index number. When translating the name of an Annex VI substance into the required language(s), it may be useful to check whether an appropriate translation is already available in a public database, e.g. ClassLab, see <http://ecb.jrc.ec.europa.eu/classification-labelling/clp/> or <http://ecb.jrc.ec.europa.eu/esis/index.php?PGM=cla> ; or

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- if the substance is not included in Part 3 of Annex VI to CLP, a name and an identification number as they appear in the Classification and Labelling Inventory. The name is typically the IUPAC name⁶, the EC name or the CAS name. The identification number shall either be the Inventory reference number, the EC or the CAS number. It is recommended to use the number or numbers that warrant(s) an unambiguous identification of the substance. It should be noted that in practice it is unlikely to be convenient to choose the Inventory reference number as this may not have been available at the time the relevant Safety Data Sheet was prepared, see above. Instead, the choice of an identifier such as (where applicable) EC number or CAS number may be advisable, in order to minimise the need for revision of the Safety Data Sheet; or
- if the substance is neither included in Part 3 of Annex VI to CLP nor in the Classification and Labelling Inventory, the CAS number and the IUPAC name, or the CAS number and another international chemical name, e.g. the name in INCI nomenclature⁷, where applicable. It may be assumed that this concerns substances that are for the first time manufactured in the EU or imported, but which have not been notified yet; or
- if no CAS number is available and none of the above apply, the IUPAC name or another international chemical name, e.g. the name in INCI nomenclature where applicable.

According to CLP Article 18(3), product identifiers for mixtures shall include both:

- the trade name or the designation of the mixture; and
- the identity of all substances in the mixture that contribute to the classification of the mixture as regards acute toxicity, skin corrosion or serious eye damage, germ cell mutagenicity, carcinogenicity, reproductive toxicity, respiratory or skin sensitisation, specific target organ toxicity (STOT), or aspiration hazard.

As to the second bullet point relating to mixture labels, the chemical names selected shall identify the substances primarily responsible for the major health hazards which have caused the classification of the mixture and the assignment of the corresponding hazard statements.

To reduce the number of substance ('chemical') names on the label, no more than four names should be provided on the label for a mixture, unless necessary due to the nature and severity of the hazards. This may be the case where a mixture contains more than four substances which are all present in significant concentrations so that they contribute to the classification of the mixture for one or several of the hazards mentioned under the second bullet point above.

Sometimes a manufacturer, importer or downstream user may conclude that certain substance identifiers for a substance contained in a mixture that are required for the label or the Safety Data Sheet will put the confidential nature of his business or intellectual property rights at risk. In such cases he can direct a request to use an alternative chemical name for that substance to the Member State Competent Authority under the provisions of DPD Article 15. Where the corresponding mixture has already been classified, labelled and packaged in accordance with CLP before 1

⁶ Where the IUPAC name exceeds 100 characters, suppliers can use one of the other names (usual name, trade name or abbreviation) referred to in section 2.1.2 of Annex VI REACH provided that a C&L notification to the Agency, in accordance with CLP Article 40(1)(b), includes both the IUPAC name and the other name used.

⁷ INCI means *International Nomenclature of Cosmetic Ingredients*

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June 2015, as well as after that date, this request shall be submitted to the Agency. The alternative name shall be a more general name identifying the most important functional groups or an alternative designation, see CLP Article 24. Such requests are accompanied by a fee, in accordance with Article 3 of Commission Regulation (EU) No 440/2010. The corresponding IT tools as well as an explanatory document will be made available by the European Chemicals Agency.

4.3 Hazard pictograms

A hazard pictogram is a pictorial presentation to communicate information on the hazard concerned, see also the definition provided in CLP Article 2(3). According to CLP Article 19, the classification of a substance or mixture determines the hazard pictograms that have to be displayed on a label, as set out in parts 2 (physical hazards), 3 (health hazards) and 4 (environmental hazards) of Annex I to CLP. Information on the assignment of hazard pictograms to specific hazard classes and categories/differentiations can also be found in Annex V to CLP. Currently there are nine different pictograms. While normally only one pictogram is assigned to an individual hazard class or category, few hazard differentiations have to carry two pictograms, namely substances and mixtures classified as self-reactive Type B or as organic peroxide Type B, see also below.

The colour and presentation of a label must allow the hazard pictogram and its background to be clearly visible, see CLP Article 31(2). Hazard pictograms shall be in the shape of a square set at a point, i.e. they shall appear as a diamond shape when the label is read horizontally, and must have a black symbol on a white background with a red border (see section 1.2.1 of Annex I to CLP). The exact *type* of red, i.e. the Pantone colour number, is not defined, and labellers are free to use their discretion: Each hazard pictogram⁸ shall cover at least one fifteenth of the minimum surface area of the label dedicated to the information required by CLP Article 17, but the minimum area shall not be less than 1 cm².

The pictograms are provided free of charge for download from the website <http://www.unece.org/trans/danger/publi/ghs/pictograms.html>. An example pictogram is the exclamation mark (pictogram GHS07), which is assigned to various health hazard classes and categories of lower severity, see Part 2 of Annex V to CLP:



For substances and mixtures classified for more than one hazard, several pictograms may be required for the label. In such cases it has to be checked whether the precedence rules set out in CLP Article 26 apply. As a general rule, the pictograms which reflect the most severe hazard category of each hazard class shall be included on the label. This would also apply where a substance has both a harmonised and a non-harmonised (i.e. self-) classification, see CLP Article 26(2).

Further to this, CLP sets out precedence rules relating to particular hazard pictograms and classifications:

- **For physical hazards**, if the label carries the pictogram GHS01 (exploding bomb), then GHS02 (flame) and GHS03 (flame over circle) are optional ...

⁸ The size of the pictogram relates here to the dimensions of the pictogram itself, and not to the size of the virtual square within which the pictogram is.

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mandatory optional optional

... except in cases where more than one pictogram is compulsory, namely for substances and mixtures classified as self-reactive Type B or as organic peroxide Type B, see Annex I to CLP;

- **For physical and health hazards**, if the label carries the pictogram GHS02 (flame) or GHS06 (skull and crossbones), then GHS04 (gas cylinder) is optional⁹:



mandatory mandatory optional

- **For health hazards**, if the label carries the pictogram GHS06 (skull and crossbones), then GHS07 (exclamation mark) shall not appear:



- **For health hazards**, if the label carries the pictogram GHS05 (corrosion), then GHS07 (exclamation mark) shall not be used for skin or eye irritation ...



... but still has to be used for other hazards;

⁹ This precedence rule is introduced by the 2nd ATP to the CLP Regulation.

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- **For health hazards**, if the label carries the pictogram GHS08 (health hazard) for respiratory sensitisation, then GHS07 (exclamation mark) shall not be used for skin sensitisation or for skin or eye irritation ...



... but still has to be used for other hazards.

Please note that the transport rules on labelling may apply to a substance or mixture as well. In certain cases, a particular CLP hazard pictogram on the packaging may be omitted, see CLP Article 33.

In case a substance or mixture is assigned the supplemental hazard statement EUH071 (“Corrosive to the respiratory tract”), a corrosivity pictogram (GHS05) may be assigned, see Note 1 of Table 3.1.3 of Annex I to CLP. Where this is done, the pictogram GHS07 for STOT, single exposure, category 3 (respiratory tract irritation) can be omitted from the label, as well as the hazard statement H335 (“May cause respiratory irritation”), see below.

For substances and mixtures that have to be labelled both in accordance with the CLP Regulation and with the rules on the transport of dangerous goods, the CLP pictograms may be omitted from the label where a similar transport pictogram appears, see also CLP Article 33 and [section 5.4](#) of this document.

4.4 Signal words

A signal word indicates the relative level of severity of a particular hazard. The label shall include the relevant signal word in accordance with the classification of the hazardous substance or mixture: more severe hazards require the signal word ‘danger’ while less severe hazards require the signal word ‘warning’, see CLP Article 20.

The signal word relevant for each specific classification is set out in the tables indicating the label elements required for each hazard class as set out in parts 2 to 5 of Annex I to CLP. Some hazard categories (for example explosives, division 1.6) do not have a signal word.

Where a substance or mixture is classified for more than one hazard, the label shall only bear one single signal word. In such cases, the signal word ‘danger’ takes precedence.

4.5 Hazard statements

CLP hazard labels shall also bear the relevant hazard statements describing the nature and severity of the hazards of a substance or mixture, see CLP Article 21. An example is the hazard statement assigned to acute oral toxicity, category 4: “Harmful if swallowed” (H302).

The hazard statements relevant for each hazard class and category/differentiation are set out in the tables contained in parts 2 to 5 of Annex I to CLP. For most hazard

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statements, the wording can be taken as stated in Tables 1.1, 1.2 and 1.3 of Annex III to CLP. For some health hazard statements, the route of exposure or the target organ may have to be included in the statement as well, e.g. “Causes damage to the liver via ingestion” (H370) for STOT-SE, category 1. See also [section 4.8](#) of this document.

If a substance classification is harmonised and included in Part 3 of Annex VI to CLP, the corresponding hazard statement(s) relevant for this classification have to be used on the label. Note that some classifications in Part 3 of Annex VI to CLP are minimum classifications, in which case a more severe classification as well as the corresponding hazard statement may have to be assigned. Also, hazard statements may need to be included for non-harmonised hazards which are not covered in the Annex VI listing, see CLP Article 4(3).

It should be noted that in contrast to DSD, combined hazard statements are currently not foreseen under CLP. Nevertheless, some combined hazard statements have already been agreed at UN level and published in the 3rd revised edition of the UN GHS. In the EU, they are implemented through the 2nd Adaptation to Technical Progress (ATP) to the CLP Regulation (Commission Regulation (EU) No 286/2011 of 10 March 2011). This means that from 1 December 2012 for substances and from 1 June 2015 for mixtures the hazard statements relating to different routes of exposure, but to the same category, can appear as combined statements on the label and in the Safety Data Sheet, e.g. H301+H311 for category 3 for the oral and dermal route: “Toxic if swallowed or in contact with skin”.

If a substance or mixture is classified within several hazard classes or differentiations of a hazard class, all hazard statements resulting from the classification shall appear on the label, unless there is evident duplication or redundancy, see CLP Article 27. This will also apply to a substance or mixture which is assigned the supplemental hazard statement EUH071 (“Corrosive to the respiratory tract”): in this case, the hazard statement H335 (“May cause respiratory irritation”) for STOT, single exposure, category 3 (respiratory tract irritation) can be omitted from the label.

Annex III to CLP lists, in all languages, the correct wording of the hazard statements as it has to appear on the label. The hazard statements of one language shall be grouped together with the precautionary statements of the same language on the label, see also [section 3.3](#) above.

4.6 Precautionary statements

CLP hazard labels shall bear the relevant precautionary statements giving advice on measures to prevent or minimise adverse effects to human health or the environment arising from the hazards of a substance or mixture, see CLP Article 22. An example is the precautionary statement “DO NOT fight fire when fire reaches explosives.” (P373). The complete set of precautionary statements relevant for each hazard class and category/differentiation is listed by alphanumeric code in the tables indicating the label elements required for each hazard class in parts 2 to 5 of Annex I to CLP.

Precautionary statements shall be selected in line with the generic provisions set out in CLP Article 22 and 28 and with Part 1 of Annex IV to CLP: any selection shall take into account the hazard statements used, the intended or identified use or uses of the substance or mixture as well as the basic instructions specified in the “conditions for use” columns in tables 6.1 – 6.5 of Annex IV to the CLP Regulation. Doubling and redundancy should be avoided. Where the substance or mixture is supplied to the general public, one precautionary statement addressing the disposal of that substance or mixture as well as the disposal of packaging shall in general appear on

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the label, see CLP Article 28(2). Normally, not more than six precautionary statements shall appear on the label, unless necessary to reflect the nature and the severity of the hazards.

In order to provide assistance with the selection of the most appropriate precautionary statements, pertinent guidance is provided in [section 7](#) of this document.

Part 2 of Annex IV to CLP lists, in all languages, the correct wording of the precautionary statements as it shall appear on a label. The precautionary statements of one language have to be grouped together with the hazard statements of the same language on the label, see also [section 3.3](#) above.

4.7 Codes for hazard and precautionary statements

Hazard and precautionary statements are codified using a unique alphanumerical code which consists of one letter and three numbers, as follows:

- the letter “H” (for “hazard statement”) or “P” (for “precautionary statement”). Please note that hazard statements carried through from DSD and DPD, but which are not yet included in the GHS are codified as “EUH”;
- for hazard statements, a digit designating the type of hazard, e.g. “2” for physical hazards; and two digits corresponding to the sequential numbering of hazards, such as explosivity (codes from 200 to 210), flammability (codes from 220 to 230), etc.
- for precautionary statements, a digit reflecting one of five types of statements, namely general statements (1), prevention statements (2), response statements (3), storage statements (4) and disposal statements (5), followed by two digits for the sequential numbering of the statements themselves.

The code ranges for the hazard and precautionary statements under CLP are set out in Table 4 below:

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Table 4: Code ranges of hazard and precautionary statements under CLP

Hazard Statements: H	Precautionary Statements: P
200 – 299 Physical hazard	100 – 199 General
300 – 399 Health hazard	200 – 299 Prevention
400 – 499 Environmental hazard	300 – 399 Response
	400 – 499 Storage
	500 – 599 Disposal

It should be noted that the codes of the hazard and precautionary statements as well as of any supplemental label elements referred to in CLP Article 25(1) are not necessary for the label – CLP only requires the actual phrasing of the applicable statements for the label.

4.8 Supplemental labelling information

CLP Article 25 introduces the concept of ‘supplemental information’ which is intended to incorporate additional labelling information over and above that listed in CLP Article 17(a) to (g). This additional labelling information can be divided into two categories, namely obligatory and non-obligatory information. Both types count as ‘supplementary information’ under CLP and must be located in the section for supplemental information on the label while they have to appear in the same languages as the other CLP label elements.

The obligatory supplemental labelling information can in principle be:

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- Supplemental hazard statements relating to particular physical and health properties, which have been taken over from DSD. These are codified as “EUH” statements, e.g. EUH001, see Part I of Annex II, while the code number corresponds to the number of the relevant risk phrase under DSD, i.e. EUH001 corresponds to R1 under DSD. For some substances with harmonised classifications, supplemental hazard statements are included in Part 3 of Annex VI;
- Supplemental statements for certain mixtures taken over from DPD, e.g. the phrase “Contains isocyanates. May produce an allergic reaction” (EUH204), see Part 2 of Annex II to CLP. These phrases are assigned EUH codes as well, to align their presentation with the supplemental hazard statements, see above;
- For the label of substances until 1 December 2012 and of mixtures until 1 June 2015: the signal word (Danger) and hazard and precautionary statements relating to the classification “Hazardous to the ozone layer” which has been retained from DSD, see Part 5 of Annex I. The individual labelling elements for this hazard class are subject to the precedence rules set out in CLP Articles 20 and 26-28. After the aforementioned dates and following the adoption of the 2nd ATP to the CLP Regulation, this hazard class will be converted into a regular CLP hazard class. This means that the signal word (Warning), the hazard statement H420 (Harms public health and the environment by destroying ozone in the upper atmosphere), the precautionary statement P502 (Refer to manufacturer/supplier for information on recovery/recycling) and the hazard pictogram GHS07 (exclamation mark) will have to be applied, in accordance with the provisions of Title III of CLP;
- Specific response information as referred to in the brackets of the precautionary statements P320 “Specific treatment is urgent (see ... on this label)”, P321 “Specific treatment (see ... on this label)” and P322 “Specific measures (see ... on this label)” in Annex IV to CLP, e.g. “see supplemental first aid instructions on this label” or “see supplemental instructions on the administration of antidotes on this label”. See also Table 5 below and the tables in section 7.3 of this document;
- For mixtures containing components of unknown acute toxicity at a concentration at 1% or greater, the statement “x percent of the mixture consists of component(s) of unknown toxicity”, see point 3.1.3.6.2.2 of Annex I to CLP. This statement will also have to be included in the Safety Data Sheet. In this connection, it may be worthwhile to specify the statement as follows: “x percent of the mixture consists of component(s) of unknown acute (oral/dermal/inhalation) toxicity”, in particular where the substance is also classified for other hazards and where it is important to specify the route of exposure, see also point 3.1.4.2 of the Guidance on the Application of the CLP Criteria;
- As of 1 June 2015 and following the 2nd ATP to the CLP Regulation: for mixtures where no useable information on the acute and/or long-term hazard to the aquatic environment is available for one or more of the relevant components, the statement “Contains x percent of components with unknown hazards to the aquatic environment”, see the changes to point 4.1.3.6.1 of Annex I to CLP. This statement has currently to be included in the Safety Data Sheet only;
- The supplemental statement EUH401 for hazardous substances and mixtures within the scope of Directive 91/414/EEC (see Part 4 of Annex II);

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- Label elements resulting from other Community acts, see CLP Article 32(6), e.g. the authorisation number requested by the REACH Regulation (EC) No1907/2006, the listing of surfactants and perfumes according to the Detergents Regulation 648/2004, the flammability labelling according to the Aerosol Dispensers Directive 75/324/EEC or the content of volatile organic compounds (VOC) in accordance with the VOC Directive 2004/42/EC.

It should be noted that in some cases additional information to complement a hazard statement may have to be provided, such as the specification of the route of exposure or of the target organ for certain health hazards, i.e. for the CMR and the STOT single and repeated exposure hazard classes. For example, for the STOT repeated exposure hazard class, the hazard statement H372 (“Causes damage to organs through prolonged or repeated exposure”) shall be complemented by the organs affected if known and by the route of exposure if it is conclusively proven that no other routes of exposure cause the hazard. However, this does not constitute supplementary labelling information in the meaning of CLP Article 25. It is rather additional hazard information which is required to be included within the hazard statement itself, beyond the standardised wording as set out in Table 1.2 of Annex III to CLP, see also [section 4.5](#) of this document.

Most of this obligatory supplemental information is taken over from DSD/DPD and therefore usually only applies in the EU. For any supplemental hazard statements included in CLP, a new “EU” codification system is introduced, to distinguish them from the hazard statements originating from the UN GHS. These are easily recognizable with a EUH code.

As it is obligatory to place this information alongside the label elements required by CLP Article 17(a) to (g), these supplemental label elements need to be considered carefully as to the location and the space they need when preparing a CLP label for a substance or mixture. **Obligatory supplemental information, when applied, shall be easy to identify and to read. Naturally, it has precedence over any non-obligatory supplemental information if space on the label is limited.** However in some cases suppliers may find they need to include certain elements on the label which are not legally obligatory, but are necessary for the handling and use of the product – such as basic instructions for use. In this case, the need for such information should also be taken into account when deciding how to lay out the label.

In this connection it should be mentioned that CLP suggests, but does not explicitly require, that the section for supplemental label information should be one single location on the label – a supplier may also choose to place the supplemental information in several locations, taking into account the requirements of CLP Article 25. Examples are i.a. provided by the labels 6.3 and 6.5 in [section 6](#) of this document. Similarly, CLP suggests, but does not explicitly require that the section for supplemental label information be marked or visibly separated from the labelling elements according to CLP Article 17(a) to (g), e.g. by placing it in another section of the label, by putting it in a text box, by colour or by different letter size.

Undoubtedly visible separation will support the identification of the labelling elements which come from the UN GHS. However, and on a case-by-case basis, it may not be advisable to make a visible differentiation between the CLP elements and obligatory supplemental labelling information that is requested by other legislation, namely where the latter supports the safe handling and use of a substance or mixture. For example, where additional EUH statements express a similar warning as contained in the hazard statements which reflect a classification, it is even advisable to group both statements together on the label so that they reinforce each other, e.g. for lithium (EC No 231-102-5) which is classified as water-reactive category 1, EUH014 (“Reacts

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violently with water.”) is very similar to H260 (“In contact with water releases flammable gases which may ignite spontaneously.”), see example label 6.4 below.

In relation to readability, obligatory labelling information required by other Community legislation, e.g. the content of volatile organic compounds as required by Directive 2004/42/EC¹⁰ or the listing of specified constituents as required by Regulation (EC) No 648/2004¹¹, shall not be treated differently from other obligatory labelling information required by CLP itself: similar to the latter, it shall be easy to identify and to read and take precedence on the CLP label over any other non-obligatory supplemental information.

An overview of the obligatory supplemental label elements to be included in the section for supplemental information on the label is provided in Table 5:

¹⁰ Directive 2004/42/EC of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC

¹¹ Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents

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Table 5: Obligatory supplemental labelling information pursuant to CLP Articles 25 and 32

Legal Reference	Type and Applicability	Code	Content / Phrasing
CLP Article 25(1) and Annex II, Part 1, section 1.1		EUH001	<i>Explosive when dry</i>
		EUH006	<i>Explosive with or without contact with air</i>
		EUH014	<i>Reacts violently with water</i>
		EUH018	<i>In use, may form flammable/ explosive vapour-air mixture</i>
		EUH019	<i>May form explosive peroxides</i>
		EUH044	<i>Risk of explosion if heated under confinement</i>
CLP Article 25(1) and Annex II, Part 1, section 1.2		EUH029	<i>Contact with water liberates toxic gas</i>
		EUH031	<i>Contact with acids liberates toxic gas</i>
		EUH032	<i>Contact with acids liberates very toxic gas</i>
		EUH066	<i>Repeated exposure may cause skin dryness or cracking</i>
		EUH070	<i>Toxic by eye contact</i>
		EUH071	<i>Corrosive to the respiratory tract</i>
CLP Article 25(6) and Annex II, Part 2	Supplemental statements for certain mixtures. They need to be assigned to mixtures in accordance with the conditions specified in Annex II, Part 2.		
	1. Mixtures containing lead	EUH201	<i>Contains lead. Should not be used on surfaces liable to be chewed or sucked by children</i>
	- for packaging content less than 125 ml	EUH201A	<i>Warning! Contains lead.</i>
	2. Mixtures containing cyanoacrylates	EUH202	<i>Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.</i>
	3. Cement and cement mixtures	EUH203	<i>Contains chromium (VI).</i>

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Legal Reference	Type and Applicability	Code	Content / Phrasing
			<i>May produce an allergic reaction</i>
	4. Mixtures containing isocyanates	EUH204	<i>Contains isocyanates. May produce an allergic reaction</i>
	5. Mixtures containing epoxy constituents with an average molecular weight ≤ 700	EUH205	<i>Contains epoxy constituents. May produce an allergic reaction</i>
	6. Mixtures sold to the general public which contain active chlorine	EUH206	<i>Warning! Do not use together with other products. May release dangerous gases (chlorine)</i>
	7. Mixtures containing cadmium (alloys) and intended to be used for brazing or soldering	EUH207	<i>Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions.</i>
	8. Mixtures not classified as sensitising but containing at least one sensitising substance ¹²	EUH208	<i>Contains (name of sensitising substance). May produce an allergic reaction</i>
	9. Liquid mixtures containing halogenated hydrocarbons	EUH209 EUH209A	<i>Can become highly flammable in use or Can become flammable in use</i>
	10. Mixtures not intended for the general public	EUH210	<i>Safety Data Sheet available on request</i>
	11. Aerosols		<i>Aerosols are also subject to the labelling provisions of Directive 75/324/EEC</i>
CLP Article 25(5) and Annex I, Part 5	Signal word, hazard statement and precautionary statements for a hazard class included in Part 5 of Annex I (see the pertinent bullet point in the text preceding this table)	EUH059 P273 P501	<i>Danger (signal word) Hazardous to the ozone layer Avoid release to the environment Dispose of contents/container to (specification of the site of disposal or of the applicable legislation, see section 7 below)</i>
Annex IV	Substances and mixtures		Supplemental first aid

¹² Pursuant to the 2nd ATP to the CLP Regulation, mixtures classified as sensitising containing other substance(s) classified as sensitising (in addition to the one that leads to the classification of the mixture) and present in a concentration equal to or greater than that specified in Table 3.4.6 of Annex I to CLP shall bear the name(s) of that/those substance(s) on the label. This provision shall apply, in respect of mixtures, from 1 June 2015. However, by way of derogation, mixtures classified, labelled and packaged in accordance with Directive 1999/45/EC or Regulation (EC) No 1272/2008 and placed on the market before 1 June 2015, are not required to be relabelled in accordance with this provision until 1 June 2017.

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Legal Reference	Type and Applicability	Code	Content / Phrasing
	assigned the precautionary statements - P320 - Specific treatment is urgent (see ... on this label). - P321 - Specific treatment (see ... on this label). - P322 - Specific measures (see ... on this label).		instruction (e.g. administration of an antidote) referred to in the brackets of the precautionary statements
Annex I, section 3.1.3.6.2.2.	Mixture containing ingredient(s) of unknown acute toxicity at a concentration at 1% or greater		<i>x percent of the mixture consists of component(s) of unknown toxicity</i> (also for Safety Data Sheet)
Annex I, section 4.1.3.6.1	Mixture where no useable information on the acute and/or long-term aquatic hazard is available for one or more of the relevant components		<i>Contains x percent of components with unknown hazards to the aquatic environment</i> (also for Safety Data Sheet)
CLP Article 25(2)	Supplemental statement for substances and mixtures within the scope of Directive 91/414/EEC	EUH401	<i>To avoid risks to human health and the environment, comply with the instructions for use</i>
Label elements resulting from other Community acts pursuant to Article 32(6)	<u>Examples:</u> - Regulation (EC) No 1907/2006 (REACH) - Regulation (EC) No 648/2004 (detergents) - Directive 75/324/EEC (aerosol dispensers) - Directive 2004/42/EC (VOC)		- authorisation number - listing of specified constituents such as anionic surfactants, oxygen bleaching agents, enzymes, disinfectants, optical brighteners and perfumes - flammability labelling - content of volatile organic compounds

Non-obligatory supplemental labelling information, the content of which is up to the discretion of the supplier, is not part of the labelling requirements under CLP. It can include, for example, specific product information or particular instructions for use.

This non-obligatory supplemental information may also be placed alongside the label elements required in CLP Article 17(a) to (g) and the obligatory supplemental information, when applied. However, it shall not distract from nor contradict to these obligatory label elements and shall also provide further details, see CLP Article 25(3). In addition, any non-obligatory supplemental information, either included on the label or on the packaging, must be consistent with the classification of the substance or mixture, see CLP Article 25(4). This means that statements like 'non-toxic', 'non-polluting' or 'ecological', statements suggesting that the substance/mixture is not hazardous or statements that are incompatible with the assigned classification may not appear on the label or packaging of a classified substance or mixture.

5. GUIDANCE ON PARTICULAR ASPECTS OF CLP HAZARD LABELLING

5.1 Further aspects to consider for the CLP hazard label

To enable the supplier to design labels in compliance with CLP while at the same time allowing for as much freedom in arranging labels as possible, further labelling aspects should be considered:

- Label size: section 1.2 of Annex I to CLP defines the label size, setting out **minimum dimensions** for the label, with the pictogram size being linked to these minimum dimensions. Nevertheless, the label should be large enough to contain all the label elements defined by CLP while remaining legible. As a result, the label may need to be larger than the minimum area specified;
- Specific labelling rules: they refer to specific labelling and packaging situations, e.g. where a substance or mixture is contained in **awkwardly shaped or small packaging**, see CLP Article 29. Other rules, i.e. the rules set out in CLP Article 33, refer to **multiple layers of packaging** and/or where a substance or mixture is subject to the labelling provisions of the CLP Regulation and to **the labelling provisions in accordance with the rules on the transport of dangerous goods** according to the United Nations Model Regulations on the Transport of Dangerous Goods (the so-called "Orange Book") which are implemented in the EU through international modal agreements and Directive 2008/68/EC, hereinafter referred to as the rules on the transport of dangerous goods. The person(s) responsible for compiling a CLP label need(s) to consider all of these rules before making a final decision on the label of his substance or mixture;
- Selection of precautionary statements: while the rules on the use of signal words, hazard pictograms and hazard statements are quite unambiguous in CLP, see above, the **selection of the most appropriate set of precautionary statements** for the label is largely at the discretion and ingenuity of the supplier. To facilitate this selection, guidance on the selection of precautionary statements is provided in [section 7](#) of this document. The guidance builds upon the generic provisions set out in CLP Article 22 and 28 as well as the basic instructions provided in the columns containing the conditions for use in tables 6.1-6.5 of Annex IV to CLP. It takes into account i.a. the intended uses and the physical properties of the substance or mixture.

5.2 Size of the label and of the label elements

As outlined in [section 3.4](#) above, the number of label elements required for a CLP-compliant label for a given substance or mixture can be higher compared to the DSD/DPD regime for various reasons. Further label elements may have to be added, requiring additional labelling space and possibly also another labelling arrangement compared to the DSD/DPD label.

The CLP Regulation defines minimum dimensions on the size of the label and some of its elements. They are detailed in section 1.2 of Annex I to CLP, see also Table 6 below. The minimum dimensions are taken over from DSD.

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Table 6: Minimum dimensions of labels and pictograms under CLP

Capacity of the package	Dimensions of the label (in millimetres)	Dimensions of the pictogram (in millimetres)
≤ 3 litres	If possible, at least 52 x 74	Not smaller than 10 x 10 If possible, at least 16 x 16
> 3 litres but ≤ 50 litres	At least 74 x 105	At least 23 x 23
> 50 litres but ≤ 500 litres	At least 105 x 148	At least 32 x 32
> 500 litres	At least 148 x 210	At least 46 x 46

In general, CLP requires that the label elements as referred to in CLP Article 17(1) be of such size and spacing as to be easily read, see also [section 3.1](#) above.

It should be noted that it is allowed to accommodate more language(s) on a label than are required by the Member State where the substance or mixture is placed on the market: where the label complies with the (minimum) dimensions set out in Table 6 above and as long as legibility of the text elements is warranted, the decision on the number of languages is at the discretion of the respective supplier.

The exact **size of the letters** of the signal words, hazard statements, precautionary statements and any supplemental information is not further defined in the legal text, i.e. it is left to the discretion of the supplier. This means that a stakeholder may decide himself whether he wants to increase the letter size with the overall volume of the packaging and dimensions of the label, or to fix it more or less for all volumes and labels.

Similarly, a supplier may decide whether he prefers to have larger letter sizes for certain label elements while others are presented in smaller letters. Actually some companies choose to provide the signal word “Danger” or “Warning” in larger letters on the label than the hazard and precautionary statements. Various companies also choose to generally present the obligatory label elements in larger letters than the non-obligatory labeling information. Both scenarios are in principle compatible with the CLP legal text as far as the obligatory information on the label can be easily read.

Actually some stakeholders recommend using a minimum letter size of 1,8 mm, in order to warrant the legibility of the text. However, this can be understood as recommendation only, but not as legal requirement which is fixed in the CLP Regulation.

In relation to the hazard pictograms, CLP links the **size of the pictograms** to the minimum dimensions of the label: each hazard pictogram¹³ shall cover at least one fifteenth of the surface area of the label dedicated to obligatory labelling information, i.e. any label elements required by CLP Article 17, 25 and 32(6), but the minimum area shall not be less than 1 cm², see section 1.2.1.2 of Annex I to CLP. The idea behind this is that the label size and the size of the pictograms should remain proportional to the size of the packaging.

¹³ The size of the pictogram relates here to the dimensions of the pictogram itself, and not to the size of the virtual square where the pictogram is in.

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In principle, a label complying with the minimum dimensions set out above should be large enough to contain all the label elements defined in CLP Article 17 while remaining legible. Precedence must be given to the obligatory label elements, i.e. to those elements defined in Article 17(a) to (g) and any obligatory supplemental information required by CLP and other Community/EU legislation. If a supplier chooses to add non-obligatory supplemental label elements, legibility may be warranted only where a small amount of such information is added. For larger amounts of non-obligatory information the supplier should consider to limit it or to increase the size of the label. In the latter case he should also consider to increase the size of the different obligatory label elements. This shall serve the purpose of facilitating their identification and maintaining their legibility.

It should be noted that a pictogram covering one fifteenth of the minimum dimensions as defined in Table 1.3 of Annex I to CLP is considered to be legible. Its size has to be increased in all cases where it occupies less than 1/15th of the surface area of the label dedicated to the obligatory labelling information, i.e. any label elements required by CLP Article 17, 25 and 32(6). However, where a supplier chooses to use a label that is larger than the minimum dimensions for a certain capacity of the package, it is not necessary for the pictogram to be increased as well, provided it covers one fifteenth of the relevant minimum dimensions, i.e. for a container of a capacity > 50 litres, but ≤ 500 litres, the minimum size of a pictogram must be 32 mm x 32 mm, which is 1/15th of the minimum dimensions (105 mm x 148mm) set out in Table 1.3 of Annex I to CLP. Any additional area gained by increasing the size of the label can be used for further information which is considered important by the supplier. However, this should be weighed against the requirement of CLP Article 25(3), namely that non-obligatory supplemental information shall not make it more difficult to identify the obligatory label elements as referred to in CLP Articles 17, 25 and 32(6).

5.3 Exemptions from the labelling and packaging requirements

Not all packages will allow the necessary labelling information on the label or on the packaging to be displayed in line with the requirements of CLP Article 31. CLP Article 29 and section 1.5.1 of Annex I recognise such situations in providing derogations for packaging which is so small or in such a shape or form or that it is impossible to meet the requirements of CLP Article 31. While most of these provisions were brought over from DSD/DPD ("small and awkward packaging"), some new ones were introduced through CLP, out of the necessity for the legal framework to keep up with the developments in packaging technology, and to allow suppliers some flexibility when dealing with packaging that is difficult to label.

5.3.1 Use of fold-out labels, tie-on tags and outer packaging

The packaging of a substance or mixture can be so small or in such a shape or form that it is impossible to display the label elements in line with the requirements of CLP Article 31. This could either be because more than one language needs to be included on the label in the Member State where the chemical is being placed on the market, or simply because the packaging is too small or difficult to label because of its form/shape so that the full range of labelling elements even in a single language cannot be displayed. In particular, it may be impossible for the label to be read horizontally when the package is set down normally or the label elements are of insufficient size and spacing as to be easily read.

In this situation the label elements defined under CLP Article 17 may be provided either on

- fold-out labels; or

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- tie-on tags; or on
- outer packaging.

Where one of these alternatives is used, the part of the label which is attached to the packaging or, in relation to the last bullet point, the label on any inner packaging shall contain at least the hazard pictogram(s), the product identifier referred to in CLP Article 18 and the name and telephone number of the supplier of the substance or mixture, while the signal word, the hazard and precautionary statements as well as the supplemental label information may be omitted, see section 1.5.1.2. of Annex I to CLP.

It should be noted that these alternatives may not be used where a label becomes unreadable because the supplier has chosen to add more languages on a label than are required in the Member State where the substance or mixture is placed on the market. In such cases the additional languages shall be omitted from the label and a separate label has to be prepared for the other Member State(s) where these are required.

5.3.1.1 Fold-out labels and tie-on tags

Fold-out labels can be an option and are in fact commonly used where the amount of supplemental information required by other legislation means that the total label would be too large for the inner packaging. Compared to tie-on tags, the use of fold-out labels will probably be the preferred option as this will offer most space for the label elements in many cases.

In general, when a supplier recognises the need to use *fold-out labels* or *tie-on tags*, he should consider the following aspects:

- **General requirements:** Generally, a tie-on tag or fold-out label shall meet the same performance standards as a normal label i.e. the contents shall be indelible, easy to read and stand out from the background. As far as reasonably practical, the size of the fold-out label or tie-on tag should be of the same size as the equivalent normal label. The size of the pictograms shall be the same as the pictograms on the equivalent, normal label.
- **Attachment:** The fold-out label or tie-on tag should be securely attached to the packaging. This means that the label is likely to remain attached to the packaging during reasonably expected handling of the package. If part of a fold-out label is designed to be removed from the inner packaging as a standalone booklet, then the CLP information shall remain on the packaging. CLP requires that this is at least the hazard pictograms, the product identifier and the name and telephone number of the supplier of the substance or mixture.
- **Material:** There is no specific standard for label materials and performance. Where labels also contain dangerous goods information and the package is intended to be transported, the performance as required by the code which is relevant to the specific mode of transport has to be applied, e.g. by the IMDG code for the maritime mode of transport.

Fold-out labels are often made of normal, uncoated paper. Where the contents of a package may attack the printing, it is possible to coat the label with a protective coating. Current standard practice is that normally only the outer page is coated. In this situation, the label designer should try to include the obligatory labelling information, i.e. any label elements required by CLP Articles 17, 25 and 32(6), on the outer page, with the non-obligatory information (non-obligatory supplemental information) on the inner pages. Where this is not possible because of space

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constraints on the outer, coated page, he should at least include the hazard pictograms, the product identifier(s) referred to in CLP Article 18 and the name and telephone number of the supplier of the substance or mixture on the outer page, with the remaining information on the inner pages.

... and what about plant protection or biocidal products?

In relation to plant protection and biocidal products, it should be emphasised that pursuant to Recital 47 of the CLP Regulation, Directive 91/414/EEC on plant protection products and Directive 98/8/EC on biocidal products “shall remain fully applicable to any product within their scope.” Further to this, and in relation to plant protection products, the new Regulation (EC) No 1107/2009 provides in its Article 80(6) that “products labelled in accordance with Article 16 of Directive 91/414/EEC may continue to be placed on the market until 14 June 2015.”

An example of the labelling requirements of Directive 91/414/EEC is provided by Article 16(2) of Directive 91/414/EEC: it provides that Member States may permit the requirements in Article 16(1) (l), (m) and (n) to be indicated on a separate leaflet accompanying the package if the space available on the package is too small. This suggests considering the inner pages of a fold-out label as such kind of leaflet that could incorporate the mentioned items. It should be noted, however, that the inner pages of a fold-out leaflet may not contain any other items of Article 16 than those specified above, such as safety precautions for the protection of humans, animals or the environment, in the form of standard phrases selected as appropriate from those given in Annex V of the Directive, see item (h) of the same paragraph, or the type of action of the plant protection product (e.g. insecticide, growth regulator, weed killer, see item (i) of that paragraph; they shall remain on the label which is displayed on the packaging or on the outer page of the fold-out label. See example label 6.6 below.

5.3.1.2 Outer packaging

To use the space on the outer packaging for the label elements defined under CLP Article 17 can be an option where it contains many units of packages that are too small or difficult to label because of their form/shape. In such cases the requirements that normally apply to labels, see CLP Articles 31 and 32, will also apply to the label area on the outer packaging. The label on any inner or intermediate packaging shall then contain at least the hazard pictograms, the product identifier(s) referred to in CLP Article 18 and the name and telephone number of the supplier of the substance or mixture, see section 1.5.1.2. of Annex I to CLP

When the outer packaging option is used, a distributor or retailer has to take care that all the label elements required by CLP are available when he decides to sell the units individually afterwards. In this case it may be worthwhile to check whether he is allowed to apply the small packaging exemptions referred to in CLP Article 29(2), see [section 5.3.2](#) below.

5.3.2 Omission of certain label elements

If the full labelling information cannot be provided in any of the ways presented in the preceding section, namely where

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- the packaging is so small or in such (awkward) shape or form that it is impossible to meet the requirements of Article 31 for a label in the languages of the Member State where the substance or mixture is placed on the market, and where
- the labelling information can neither be provided in fold-out labels, on tie-on tags or on an outer packaging, e.g. in case of soluble packaging, or when refilling a substance or mixture into small volume bottles (125 ml or less) that are marketed afterwards, or where small volume bottles (125 ml or less) are no longer sold in outer packaging, but individually, see also [section 5.3.1.2](#) above,

CLP Article 29(2) allows the supplier to **reduce** the information on the label that would normally be required according to CLP Article 17.

5.3.2.1 Exemptions where the contents do not exceed 125 ml

The first type of exemptions relates to packages where the contents do not exceed 125 ml. The label elements mentioned in column 2 of Table 7 below which are related to the hazard classes and categories listed in column 1 of the same table may be omitted from the label where the substance or mixture is classified for these hazard classes or categories. However, where the substance or mixture is classified under further hazard classes not listed, the label elements related to these other hazard classes still need to be included.

Table 7: Labelling exemptions for packages of a capacity of 125 ml or less

Hazard classification of the substance or mixture	Allowed omissions according to section 1.5.2 of Annex I to CLP
Oxidising gases cat. 1 Gases under pressure Flammable liquids cat. 2 or 3 Flammable solids cat. 1 or 2 Self-reactive substances and mixtures, type C, D, E or F Self-heating substances and mixtures, cat. 2 Substances and mixtures which, in contact with water, emit flammable gases, cat. 1, 2 or 3 Oxidising liquids cat. 2 or 3 Oxidising solids cat. 2 or 3 Organic peroxides, type C, D, E or F Acute toxicity cat. 4 (no supply to general public) Skin irritants cat. 2 Eye irritants cat. 2 STOT-SE 2 or 3 (no supply to general public) STOT-RE 2 (no supply to general public) Aquatic acute cat. 1 Aquatic chronic cat. 1 or 2	hazard and precautionary statements for the hazard classes listed in column 1 <u>comment:</u> the hazard pictogram and signal word are required for the denoted hazard categories
Flammable gases cat.2 Effects on or via lactation Aquatic chronic cat. 3 or 4	precautionary statements linked to the hazard classes listed in column 1 <u>comment:</u> the hazard statements and signal word shall be provided as no hazard pictogram is required for the denoted hazard categories
Corrosive to metals	hazard pictogram, hazard and precautionary statements for this hazard class <u>comment:</u>

	the signal word is required for this hazard class
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5.3.2.2 Exemptions for specific cases

Further to the volume-related small and awkward packaging exemptions set out above, CLP specifies cases where similar exemptions from the labelling and packaging requirements apply:

- **Small packages of aerosols:** similar to DSD, CLP stipulates that the exemptions for labelling of small packages of aerosols as flammable laid down in the Annex to Directive 75/324/EEC¹⁴ shall apply fully to aerosol dispensers.
- **Soluble packaging:** another exemption defined under CLP applies to soluble packaging which does not exceed a volume of 25 ml: all CLP label elements required by CLP Article 17 may be omitted from soluble packaging provided it is intended for single use and it is contained within outer packaging that contains all label elements required under CLP. The exemption applies in cases where the substance or mixture contained is classified exclusively for one or more of the hazards listed in the first row of column 1 of [Table 7](#) above. However, this exemption does not apply to substances and mixtures within the scope of Directive 91/414/EEC (plant protection products) or Directive 98/8/EC (biocidal products).
- **Unpackaged hazardous substances and mixtures supplied to the general public:** a provision which is new under CLP relates to unpackaged hazardous substances and mixtures supplied to the general public: labelling information about unpackaged chemicals sold to the general public which are mentioned in Part 5 of Annex II to CLP shall be made available as (paper) copy, e.g. on an invoice or bill, see CLP Article 29(3). When the purchase of such substances or mixtures occurs at a different point in time than their delivery to the customer, one might also consider to provide a leaflet which contains the relevant labelling information when delivering the substance or mixture, or to send the information by email. However, this currently concerns only a few substances: ready mix cement and concrete in the wet state.
- **Environmental labelling:** Similar to DSD, CLP includes the possibility to introduce exemptions from environmental labelling for certain mixtures classified as hazardous to the environment where it can be demonstrated that there would be a reduction in the environmental impact, see CLP Article 29(4). However, no such exemptions have to date been agreed; rather, any exemptions will need to be determined in accordance with the 'comitology' procedure referred to in CLP Articles 53 and 54 and would be defined in Part II of Annex II to CLP.

5.4 Interaction between the CLP and the transport labelling rules

The interaction between the supply & use labelling and the transport labelling was previously regulated in Article 24(6) of Directive 92/32/EEC (i.e. in the 7th ATP to DSD) for substances and in Article 11(6) of DPD for mixtures. In the CLP Regulation, it is Article 33 which sets out specific rules for situations where the packaging of hazardous substances and mixtures is required to meet also labelling provisions in

¹⁴ Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers, as amended by Commission Directive 94/1/EC and Commission Directive 2008/47/EC

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accordance with the rules on the transport of dangerous goods.

The transport labelling provisions are set out in the United Nations Model Regulations on the Transport of Dangerous Goods (the so-called "Orange Book") and are implemented in the EU through international modal agreements and Directive 2008/68/EC for the inland transport of dangerous goods (road and rail). **Transport labelling as referred to in CLP Article 33 includes all labels and marks required by e.g. Directive 2008/68/EC**, e.g. the mark for environmentally hazardous substances, elevated temperature marks or limited/exempted quantities marks.

A basic principle of CLP is not to override any labelling required by the transport rules while maintaining essential hazard information on the relevant layer(s) of packaging.

CLP labelling is normally required on every inner and intermediate layer of the packaging of a substance or mixture; it *may* also appear on an outer packaging. Transport labelling will have to appear on the outer packaging of hazardous substances and mixtures if these are “dangerous goods” according to the rules on the transport of dangerous goods. Single packages need to carry both the CLP label elements and the transport labelling, except for the CLP hazard pictograms where these are already covered by (an) equivalent transport pictogram(s) reflecting the same hazard.

While CLP may not require outer packaging to carry the CLP label elements where it already carries the corresponding transport labelling, a supplier *may choose* to apply to the outer packaging those CLP label elements that are on the inner or intermediate packaging. This option may need to be considered where the substance or mixture is classified for a hazard that is not covered by the rules on the transport of dangerous goods – e.g. for skin and eye irritation, CMR or for the aquatic chronic hazards category 3 and 4. However, inclusion of CLP labelling on the outer packaging is not obligatory in this case.

Where the outer packaging does not need to carry labelling in accordance with the rules on the transport of dangerous goods – and this would also include transport labelling such as limited/exempted quantity marks –, both the inner/intermediate and the outer packaging shall display the CLP labelling elements. Where the outer packaging is transparent, all CLP label elements can be omitted from it where the CLP label beneath the transparent layer is clearly visible.

The assumption underlying the provisions of CLP Article 33(2) is that only one substance or mixture is contained in single or combined outer packaging. Therefore, in cases where the rules on the transport of dangerous goods do not apply and where **more than one** substance or mixture with different hazard classifications are packed together in the same outer packaging then the rules of CLP Article 33(2) should be applied with care: where the outer packaging carries different labels which relate to different packaged substances or mixtures, then the whole set of individual labels on the outer packaging may not provide coherent hazard information and safety advice, e.g. in case one substance is hazardous to the aquatic environment, the other is a carcinogen, the third one is flammable and the last one is a non-hazardous mixture.

The legal requirements of CLP Article 33 and the decisions involved when dealing with them are depicted in the following figure:

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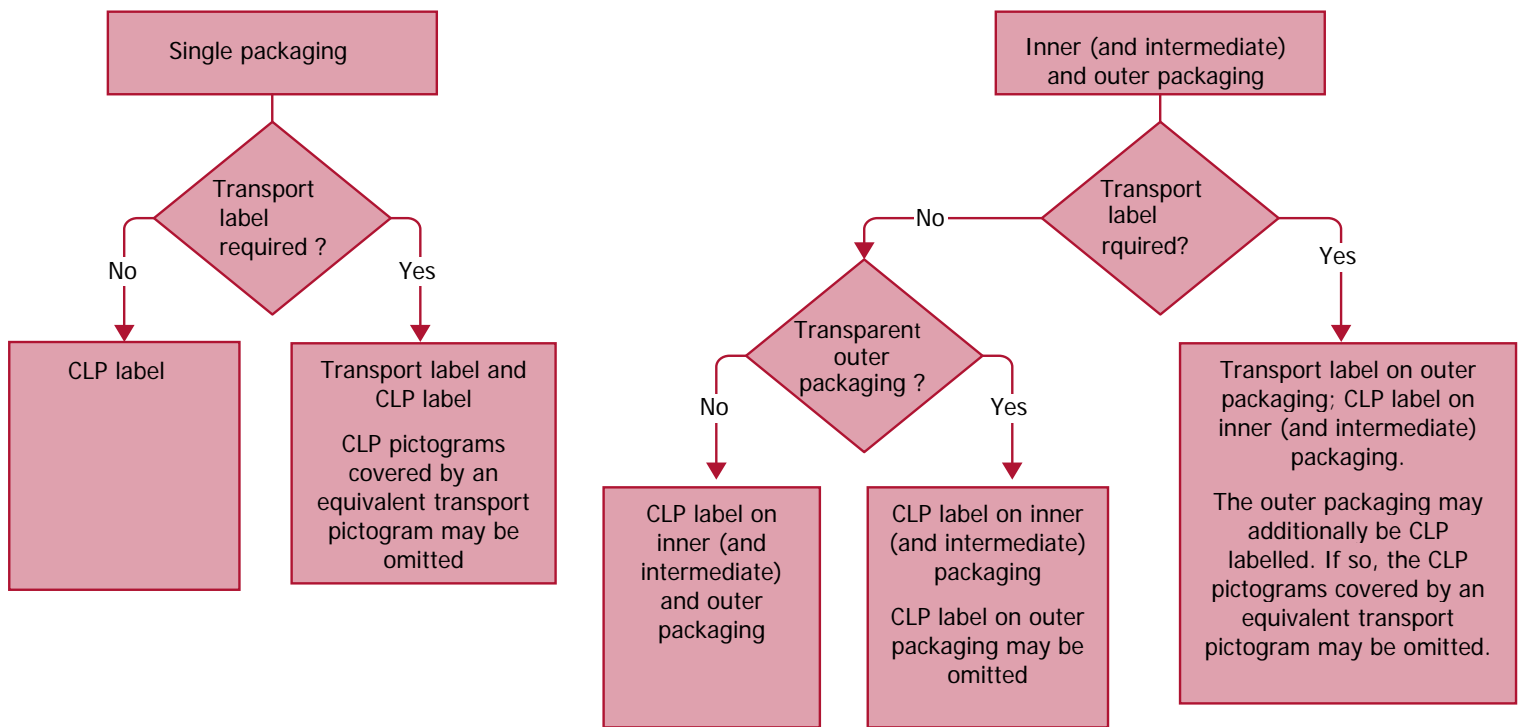


Figure 3: Decision flowchart for the application of CLP and transport labelling for single packaging (left) and combination packaging (right)

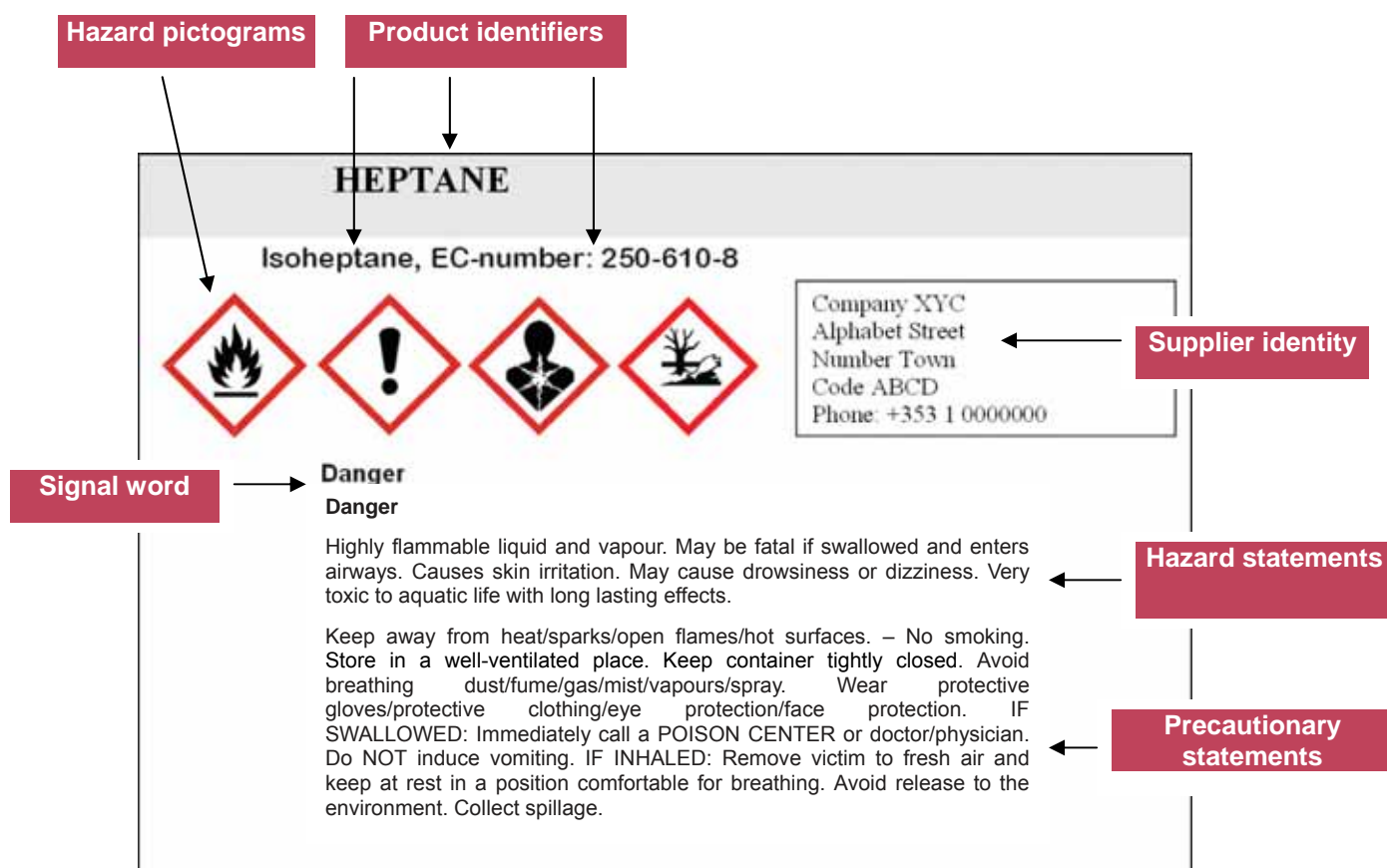
6. EXAMPLE LABELS

A number of examples are provided below to illustrate different and challenging situations that may be encountered when designing labels. Various aspects treated in this guidance document are incorporated; they will be discussed in the light of the overall label lay-out.

Please note that each of the example labels below is only an example of how to arrange a label for a given situation. The arrangements shown are not exhaustive or mandatory in all aspects, and the sizes shown are not necessarily the actual sizes.

6.1 Single language label of a substance for supply & use

Example label 6.1 represents a simple supply & use label which takes into account the CLP label elements only. It shows the CLP terminology and pictograms in accordance with CLP Article 17(a) and (c) to (g), i.e. the product identifiers, the identity of the supplier, the signal word, the hazard pictograms, the hazard and the precautionary statements. As the substance is not supplied to the general public, the nominal quantity of the substance contained in the package is not required on the label.



6.2 Multi-language label of a substance for supply & use containing non-obligatory supplemental information

Example label 6.2 represents a multi-language label for supply & use. It shows the CLP terminology and pictograms in accordance with CLP Article 17(a) and (c) to (h), i.e. the product identifier, the identity of the supplier, the hazard pictograms, the signal words and the hazard and precautionary statements in four languages. As the substance is not supplied to the general public, the nominal quantity of the substance contained in the package is not required on the label. In accordance with CLP Article 32(3), the hazard and precautionary statements of one language are located together on the label. A section for supplemental labelling is included on the left-hand side of the label including non-obligatory supplemental labelling information.

As to the lay-out, label 6.2 is an authentic label designed for a 2.5 litre bottle. Its real dimensions are significantly larger than depicted here. Based on the minimum dimensions for the label area, which would be at least 52 mm x 74 mm, the size of each of the pictograms is supposed to be at least 257 mm², corresponding to a side length of 16 mm, on the real label, see [section 5.2](#) above.

In case the section for supplemental labelling is increased, e.g. in order to incorporate information related to the use of the substance, the overall area of the label and the size of its elements may have to be increased as well, in particular the letter size of the signal words, hazard and precautionary statements. This would warrant the legibility of the obligatory label information which appears in multiple languages. In this case it may be wise also to increase the size of the pictograms.

6.3 Single language label of a mixture for supply & use containing both obligatory and non-obligatory supplemental information

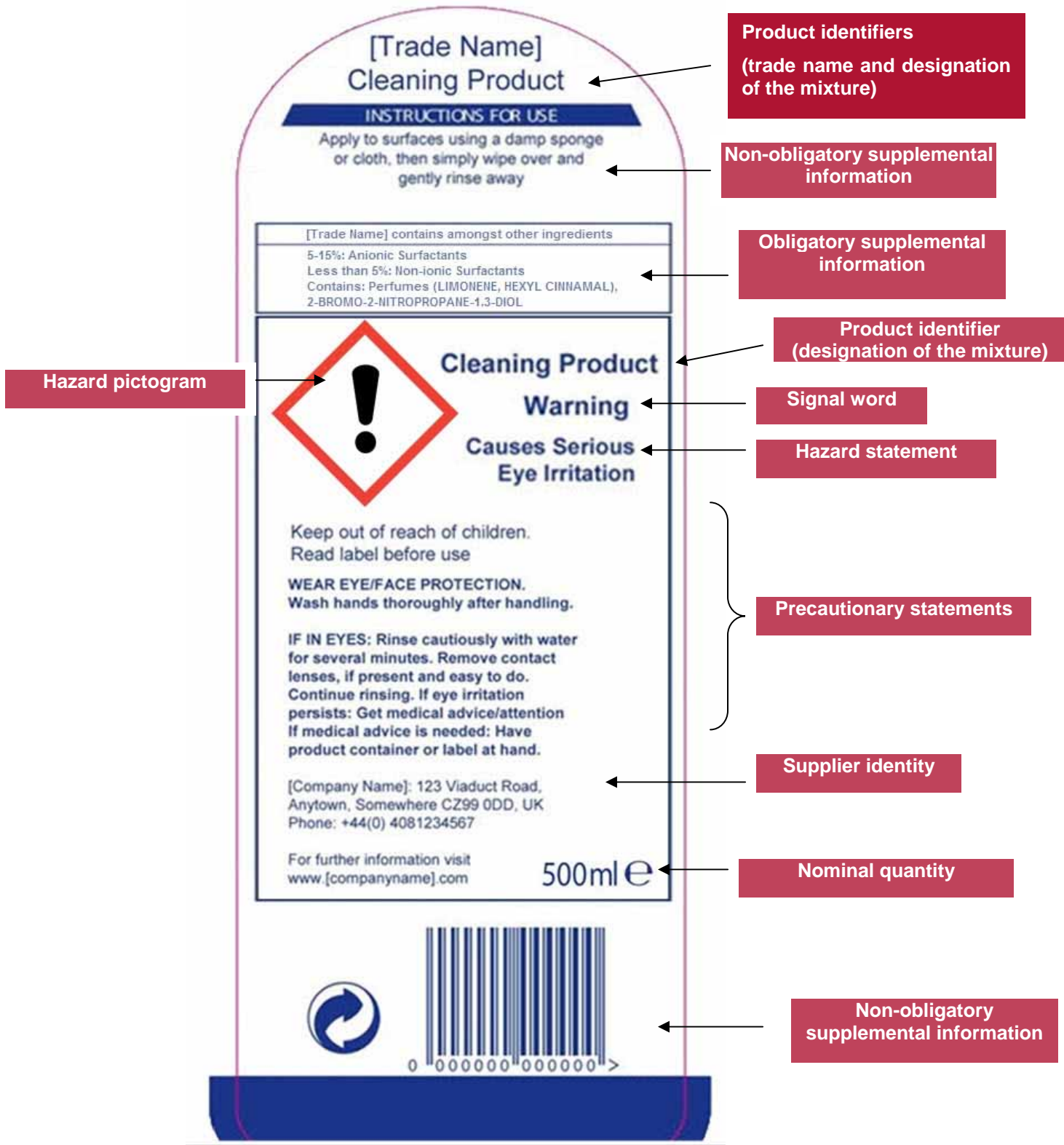
Example label 6.3 illustrates the use of a supply & use label for a typical consumer product (detergent). All obligatory labelling information is shown, i.e. the product identifiers (trade name and designation of the mixture; one of them would have been sufficient), the identity of the supplier, the signal word, the hazard and precautionary statements and the obligatory supplemental information, in accordance with Regulation (EC) No 648/2004 on detergents. As the product is supplied to the general public, its nominal quantity is also provided on the label. Beyond the obligatory supplemental information, also some non-obligatory supplemental information is shown.

This label clearly separates the obligatory information as required by CLP and other Community legislation from the non-obligatory elements. The former is delineated by two text boxes, with the “CLP box” being located in a central, eye-catching position on the label. The non-obligatory label elements can be found in the lower part of the label and in the upper part, under the headline “instructions for use”.

Example label 6.3 as depicted here has a real size of 165 mm x 72 mm; the area of the label that contains the obligatory label elements, i.e. the two boxes and the nominal quantity, is about 98 mm x 72 mm. In principle the area covered by the text block “For further information visit ...” must be subtracted; on the other hand, approximately the same area covered by the line “trade name” should be added, so there is overall no change.

Example label 6.3 is larger than the minimum dimensions required by CLP, which is at least 52 mm x 74 mm for a 500 ml bottle. The pictogram is larger than the requested minimum area of 1 cm².

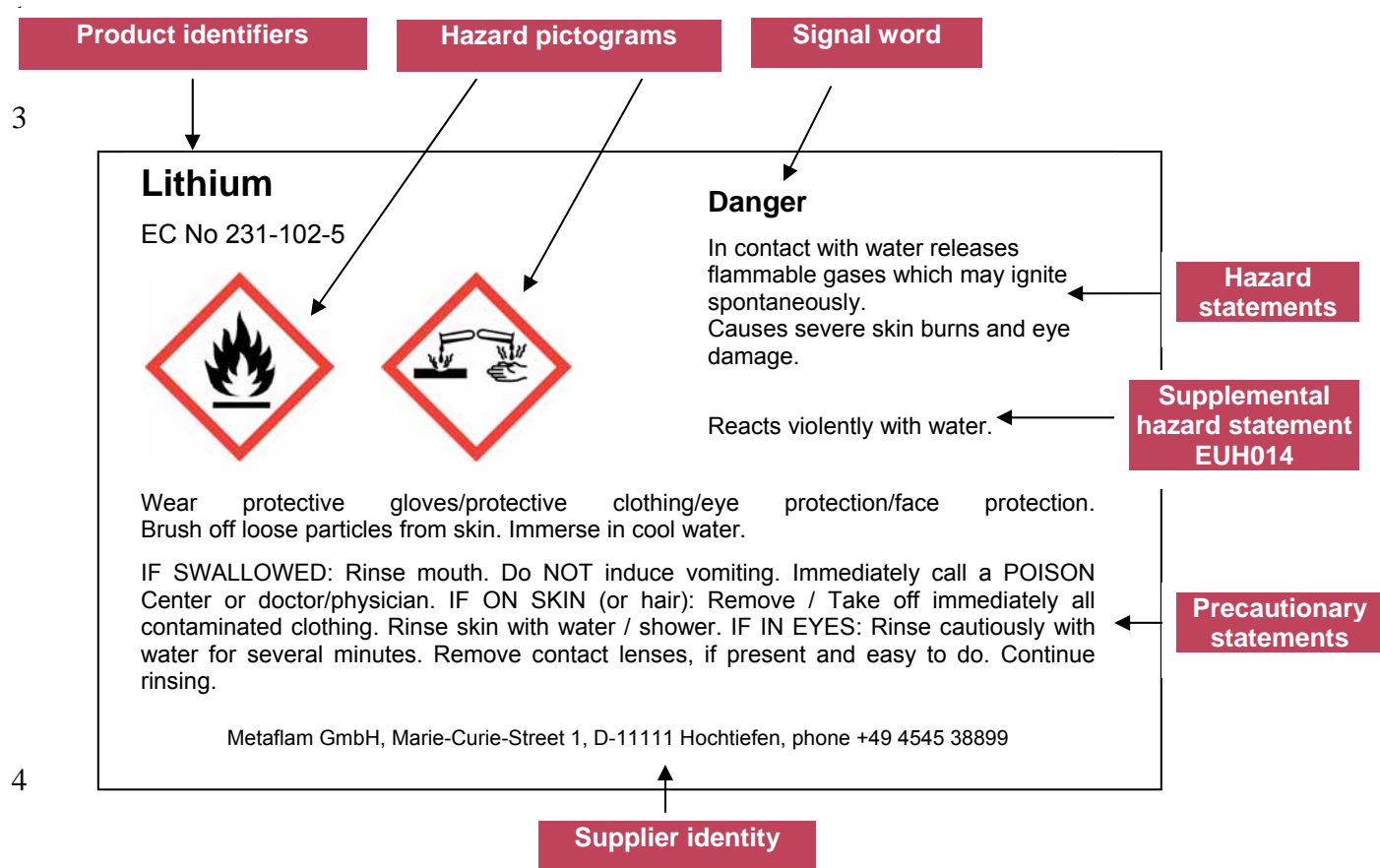
The label shown is primarily drafted for inner packaging. If the chemical is contained in combination (= inner + outer) packaging, the same information has to be shown on the outer packaging, unless the information on the inner packaging can be seen through the outer packaging.



6.4 Single language label of a substance for supply & use containing supplemental hazard statements

Example label 6.4 illustrates a supply & use label for the substance lithium (EC No 231-102-5). A harmonised classification (water-reactive cat. 1, skin corrosive cat. 1B) as well as the supplemental hazard statement EUH014 are assigned through Annex VI to CLP, while additional hazards are not found. The substance is not intended to be used by the general public; it is supplied in a 1 l package.

All obligatory labelling information is shown, i.e. the product identifiers, the identity of the supplier, the hazard pictograms, the signal word, the hazard and precautionary statements and the supplemental hazard statement EUH014, in accordance with Table 3.1 of Annex VI to CLP. Although EUH014 is supposed to be supplemental information only, it is placed by intention closely to the regular CLP hazard statements, so as to reinforce the message provided by the latter.



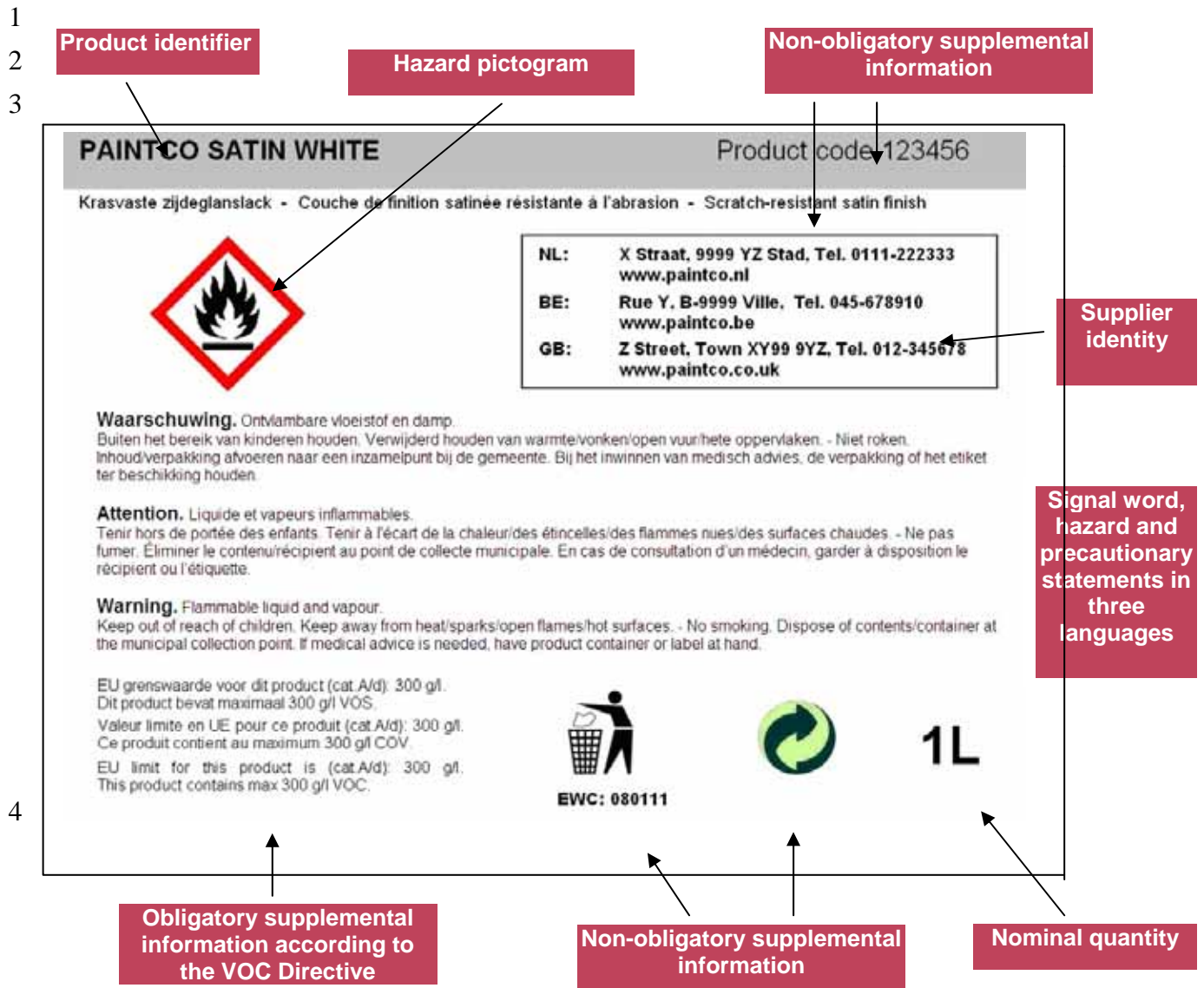
6.5 Multi-language label of a mixture for supply & use containing both obligatory and non-obligatory supplemental information

Example label 6.5 represents the draft of a multi-language supply & use label for a typical consumer chemical (decorative paint). All obligatory labelling information is shown, i.e. the product identifiers, the identity of the supplier, the signal word, the hazard and precautionary statements and the obligatory supplemental information, in particular information in accordance with the VOC Directive 2004/42/EC on the limitation of emissions of volatile organic compounds (VOC) due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products. In accordance with CLP Article 32(3), the hazard and precautionary statements of one language are located together on the label. As the chemical is supplied to the general public, its nominal quantity is also provided on the label. Beyond the obligatory label elements, non-obligatory supplemental information is shown.

This example label separates the CLP label elements from the supplemental information by locating the former in a more eye-catching position on the label while the supplemental information can be found rather in the margins of the label. The texts reflecting the supplemental information appear in slightly smaller letters than the CLP label elements.

The size of this label is intended to be 125 mm x 150 mm when applied on the packaging. This means that the real label will be considerably larger than the minimum dimensions for a 1 l package (52 x 74 mm) required under CLP. The pictogram size of 19 x 19 mm is less than 1/15th of the whole label, but greater than 1/15th of the minimum dimensions.

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6.6 Single language label of a plant protection product for supply & use in form of a fold-out booklet

Example label 6.6 illustrates the use of a fold-out label for supply & use of a plant protection product which is classified as skin irritant. The product is supplied to professional users (farmers) only, but not to the general public.

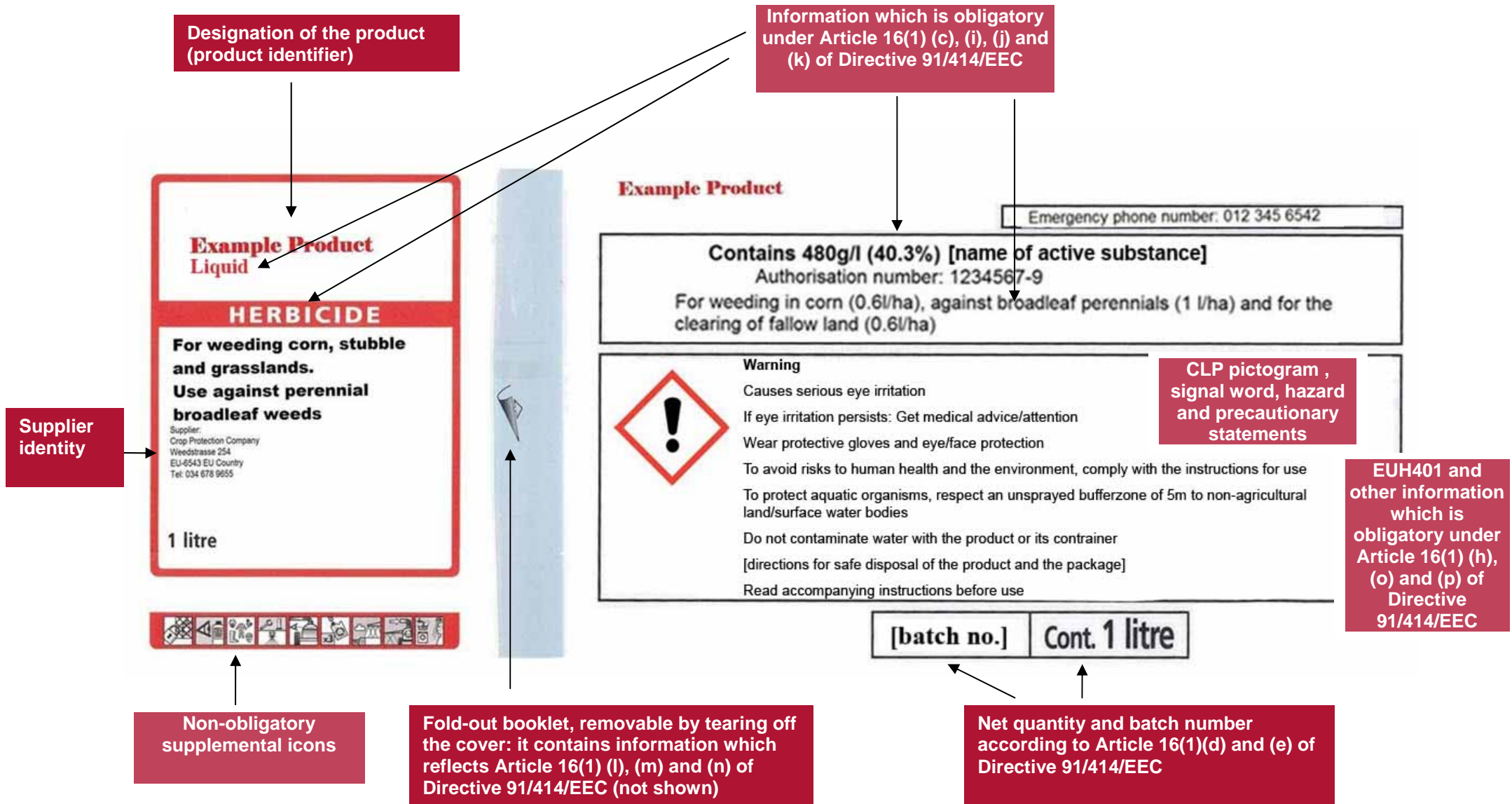
The actual size of the label is larger than depicted here. However, as the total amount of the obligatory and non-obligatory labelling information would have required a label that is too large for the package (capacity of the bottle is 1 litre), **a fold-out label is used where parts can be removed from the packaging as a standalone booklet**. The outer page is coated; the information on the outer page will remain on the package after removal of the inner pages of the fold-out label.

In accordance with Directive 91/414/EEC, the outer, coated page contains all items required under the various points of Article 16(1) of that Directive for the example substance, i.e. the designation of the product (a), the contact details of the supplier (b), the name and amount of each active substance (c), the net quantity of plant protection product (d), the formulation batch number (e), classification-related labelling elements in accordance with CLP (f), relevant safety precautions (SP1 and SPe3) (h), the type of action of the product (i), the type of preparation (j), the authorized uses (k), the sentence "Read accompanying instructions before use" (o) and directions for safe disposal of the product and its packaging (p). Items mentioned under Article 16(1) (g) and (q) are not necessary. Pursuant to CLP Article 25(2), EUH401 was included as well. Finally, the supplier decided to also include supplemental icons on the outer, coated page, using the space left after inclusion of the obligatory labelling information.

As the space on the outer, coated page is limited, labelling elements in accordance with Article 16(1) (l), (m) and (n) of Directive 91/414/EEC are placed on the inner, detachable part of the fold-out label (not shown).

The label shown is primarily drafted for inner packaging which cannot be seen through the outer packaging.

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6.7 Packaging that is small or difficult to label

The example labels in this section are authentic; they are applied on inner packaging only because the package is transported in larger consignments with specific outside labelling in accordance with the rules on the transport of dangerous goods.

6.7.1 n-Hexane in a 25 ml bottle

Example label 6.7.1 represents a two-language label in Swedish and Finnish for small packaging for the substance n-hexane. Both languages are required in Finland. According to Annex VI to CLP, the substance is assigned the following classifications:

flammable liquids cat. 2, reproductive toxicity cat. 2, aspiration toxicity cat. 1, STOT-RE cat. 2, skin irritation cat. 2, STOT-SE cat. 3, aquatic chronic hazard cat. 2.

Pursuant to CLP Article 17, quite many labelling elements would be required. As the bottle containing the substance is placed on the market individually and as the labelling information cannot be accommodated on a fold-out label, a tie-on tag or on outer packaging, the supplier is allowed to use the small packaging exemptions outlined in section 1.5.2 of Annex I to CLP. Accordingly, the hazard and precautionary statements pertaining to the hazards

flammable liquids cat. 2, STOT-RE cat. 2, skin irritation cat. 2, STOT-SE cat. 3 and aquatic chronic hazard cat. 2

may be omitted from the label. However, and in line with CLP, the hazard pictograms GHS02, GHS07, GHS08, GHS09 were retained for these hazards.

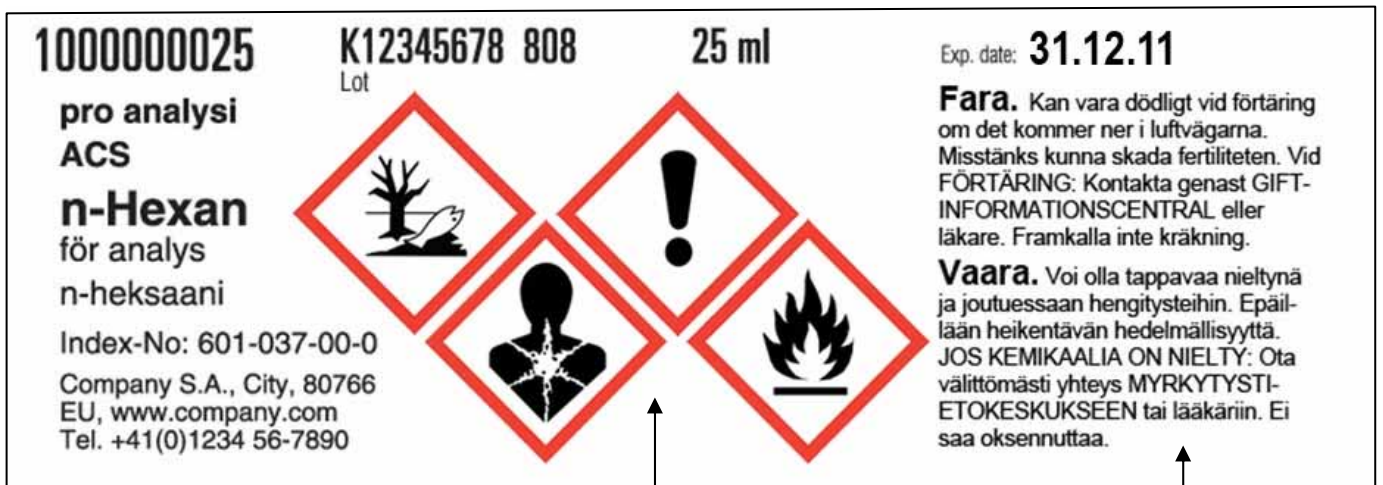
No small packaging exemptions apply for the hazards reproductive toxicity cat. 2 and aspiration toxicity cat. 1. This means that the pictograms and the hazard and precautionary statements pertaining to these hazard classes have been retained (in Swedish and Finnish, see the language tables in Annex III and IV to CLP).

The precautionary statements have obviously been reduced, following CLP Article 22 and 28. For example, P501 (Dispose of contents/container to ...) was omitted, probably because the substance is neither supplied to the general public nor are there specific disposal requirements above the normal expectation for the disposal of chemicals, see also [section 7](#). Out of a set of originally 20 different precautionary statements, finally only one single (combination) statement, namely P301+P310+P331 (If swallowed: Immediately call a poison centre or doctor/physician. Do NOT induce vomiting.) remains for the label.

In accordance with CLP Article 32(3), the hazard statements of one language as well as the precautionary statements, respectively, are located together on the label.

Finally, the signal word "Danger" (Swedish: Fara; Finnish: Vaara) was selected, in line with the applicable precedence rule.

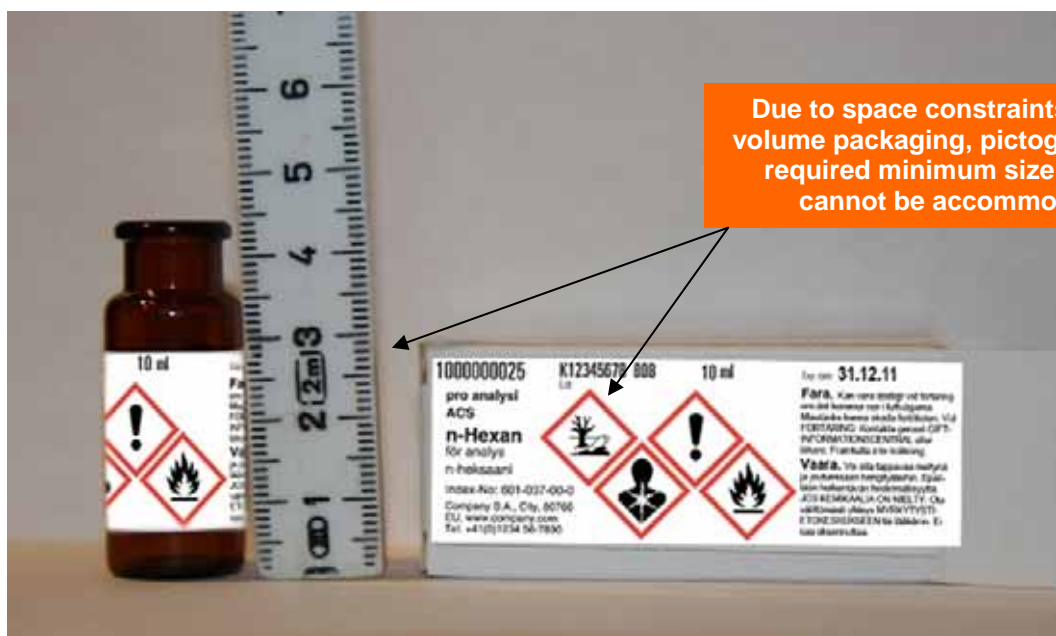
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No omissions, but full range of hazard pictograms

Small packaging exemptions: reduced set of hazard and precautionary statements, grouped together on the label by language.

The real dimensions of the label are 32 x 95 mm. It can accommodate four pictograms of the required minimum size of 1 cm². This may not always be possible for even smaller packaging volumes, e.g. a bottle volume of 10 ml, see below. In order to maintain the required minimum size of 1 cm² for the hazard pictograms in such cases, either the size of the label or the volume of the bottle as such will have to be increased. It may not be warranted to reduce the letter size of the texts as this will very probably decrease their legibility.



6.7.2 Hazardous solid substance in a 25 ml bottle

Example label 6.7.2 represents a one-language label for small packaging for a fictitious solid substance which is assigned the following classifications:

oxidising solids cat. 2, carcinogenicity cat. 1B, mutagenicity cat. 1B, reproductive toxicity cat. 1B, acute toxicity cat. 2, acute toxicity cat. 3, STOT-RE cat. 1, acute toxicity cat. 4, skin corrosion cat. 1B, respiratory sensitisation cat. 1, skin sensitisation, cat. 1, aquatic acute hazard cat.1, aquatic chronic hazard cat. 1.

Pursuant to CLP Article 17, a lot of labelling information would be required. However, and similar to the previous example, it is assumed that the supplier is allowed to use the small packaging exemptions outlined in section 1.5.2 of Annex I to CLP.

The fictitious substance is not presumed to be listed in Annex VI to CLP, nor in the Classification and Labelling Inventory. Therefore, only the product identifiers referred to in CLP Article 18(2)(c) need to be provided, i.e. the CAS number and the IUPAC or international name. In accordance with the small packaging exemptions outlined in section 1.5.2 of Annex I to CLP, only the hazard and precautionary statements pertaining to the hazards

oxidising solids cat. 2, acute toxicity cat. 4, aquatic acute hazard cat.1, and aquatic chronic hazard cat. 1

may be omitted from the label. This means that for all the other hazards listed above all the label elements that are required under CLP Title II have to appear on the label.

The precautionary statements on example label 6.7.2 start with "Obtain special instructions before use." A significant reduction has been performed for the precautionary statements, based on Articles 22 and 28 of CLP. After application of the small packaging exemptions and the selection of the most appropriate set of precautionary statements, only five (combined) statements were chosen for the label, out of about 30 precautionary statements.

In addition to the hazard and precautionary statements, five different hazard pictograms are required for the label, namely GHS03, GHS05, GHS06, GHS08 and GHS09.



Due to the severity of the hazards, substantial reduction of the hazard statements is not possible. The number of the precautionary statements, however, has been substantially reduced.

6.8 Supply and transport label for a single package

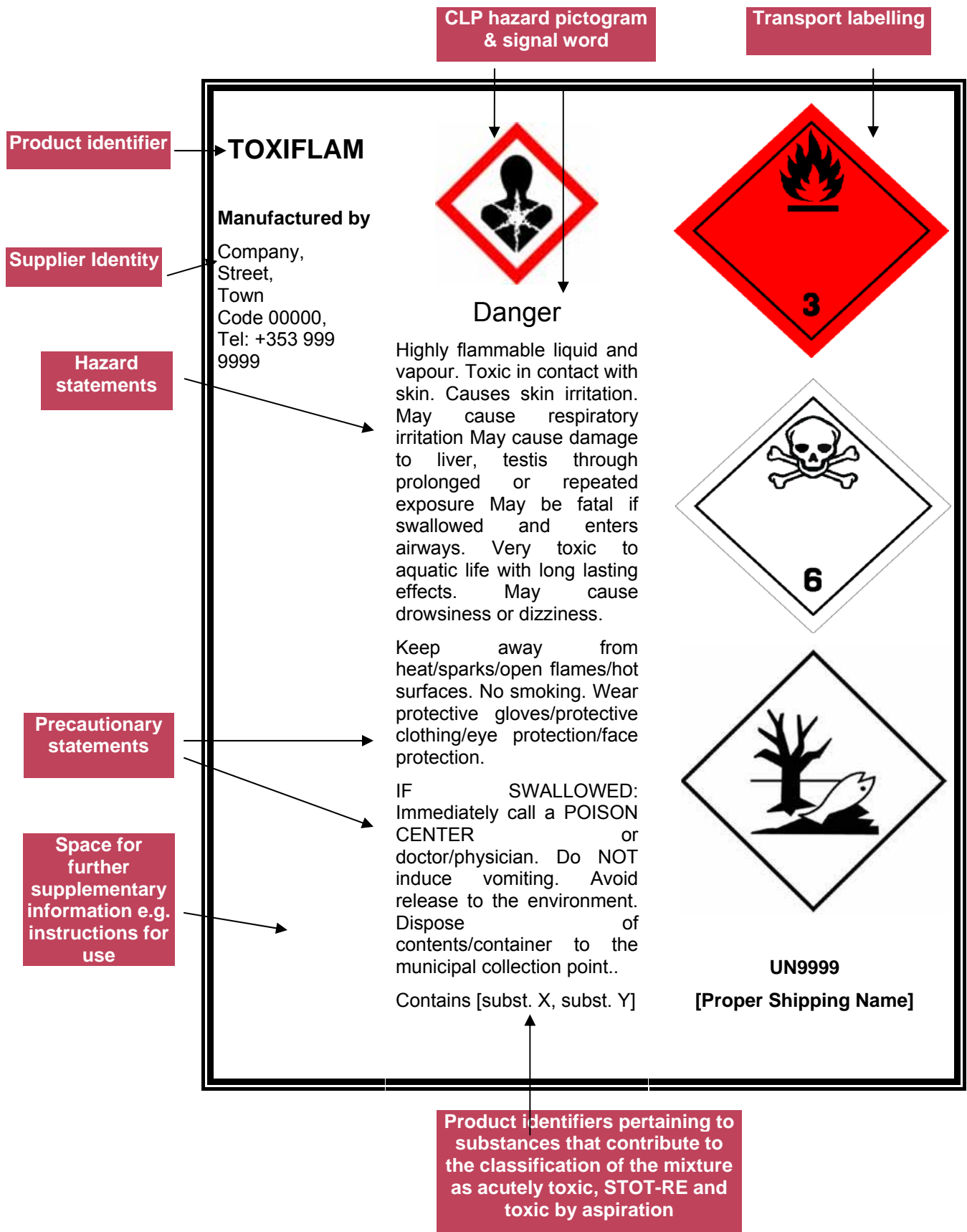
Example label 6.8 illustrates the provisions of CLP Article 33(3), it represents a label for a hazardous mixture which is assigned the following classifications:

flammable liquid cat. 2, acute dermal toxicity cat. 3, skin irritation cat. 2, STOT-SE cat. 3 (H335), STOT-SE cat. 3 (H336), STOT-RE, cat. 2, aspiration toxicity cat. 1, aquatic acute hazard cat. 1, aquatic chronic hazard cat. 1

The mixture is not intended to be used by the general public. It is intended to be supplied in single packaging, such as a 200 litre drum. This means that both the CLP and the transport label elements must be shown on the packaging.

In this case the labeller has chosen to include the transport label elements and marks together with the CLP labelling elements on a common label that would be large enough to fulfil the dimension requirements for the labels and marks set out in the rules on the transport of dangerous goods (100mm x 100mm). In relation to the CLP hazard pictograms GHS06 and GHS07, only GHS06 needs to be displayed, in accordance with the precedence rule set out in CLP Article 26(1)(b). However, the supplier has chosen to omit the CLP hazard pictogram GHS06 as well as GHS02 as the underlying hazards are already covered by the corresponding transport pictograms.

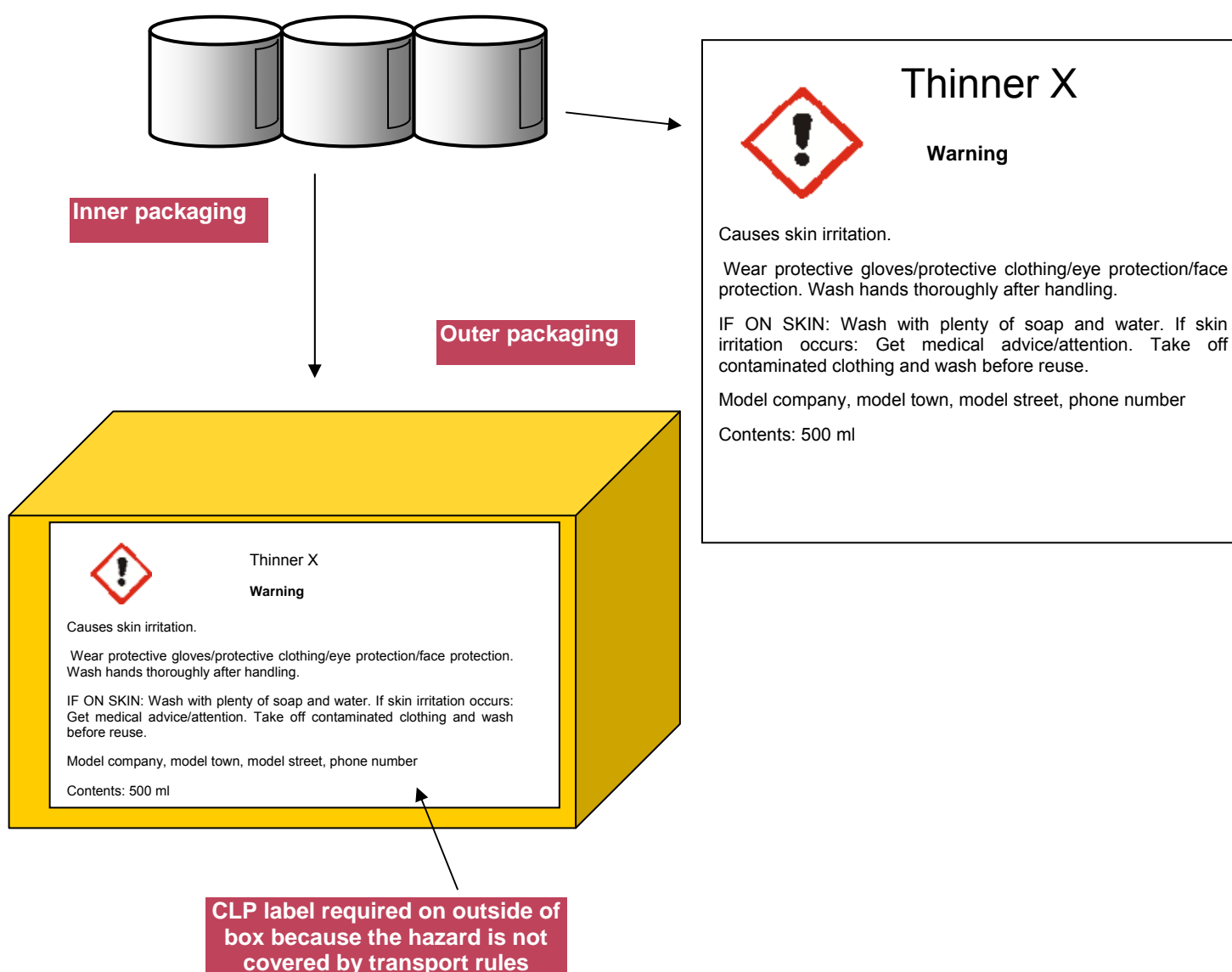
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6.9 Labelling of a chemical that is transported on land in combination packaging

Example label 6.9 illustrates the provisions of CLP Article 33(2). It is an example of a mixture which is not classified and labelled in accordance with the rules on the transport of dangerous goods, but under CLP. The chemical is transported on land and is contained in an inner packaging (cans) which is itself contained in outer packaging (box). This means that the same labelling information has to be provided both on the inner packaging and on the outer packaging.

The mixture is not intended to be used by the general public.



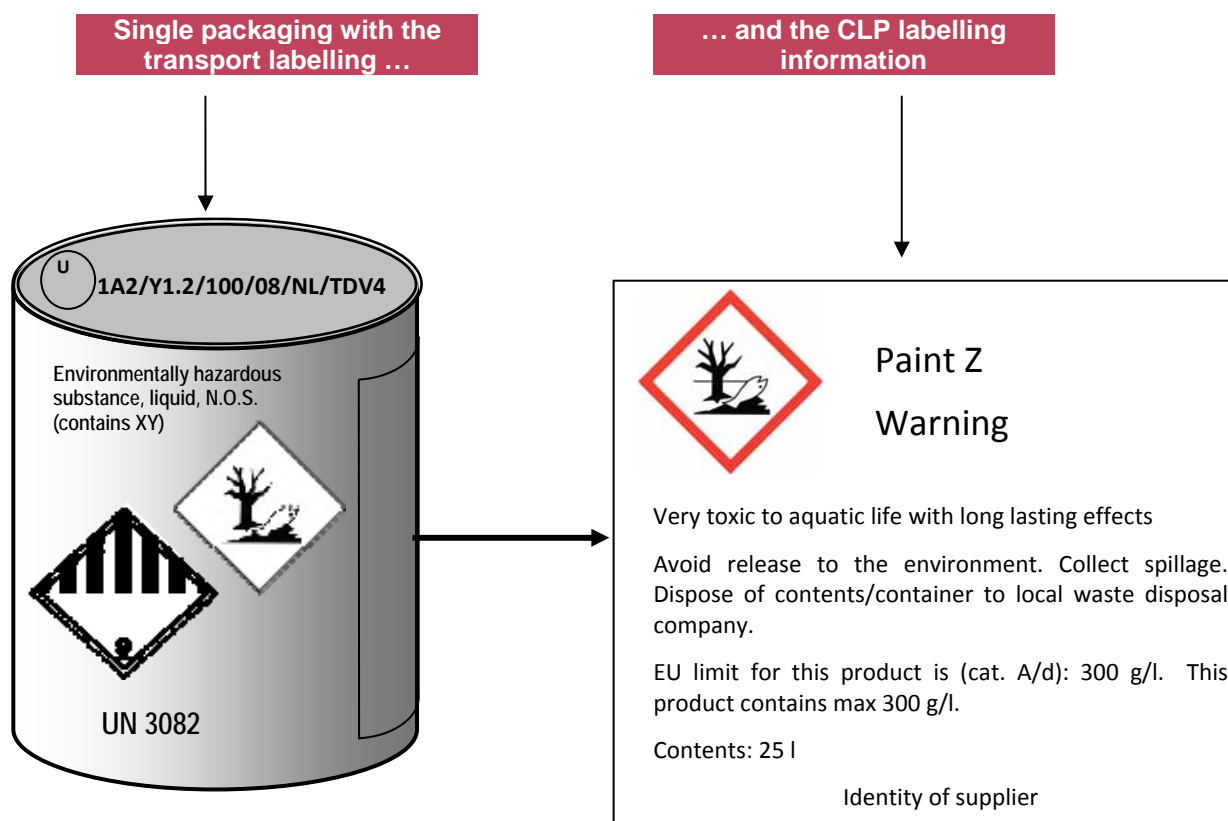
6.10 Labelling of a chemical that is transported on land in single packaging

Example label 6.10 illustrates the provisions related to the labelling of single packaging in accordance with CLP Article 33(3). It is an example of a chemical that is classified and labelled in accordance with the rules on the transport of dangerous goods and under CLP. The chemical is transported on land in single packaging (can). It is not intended to be used by the general public.

In this example the full CLP labelling information is provided by means of a separate label, in addition to the transport labelling information (version 1).

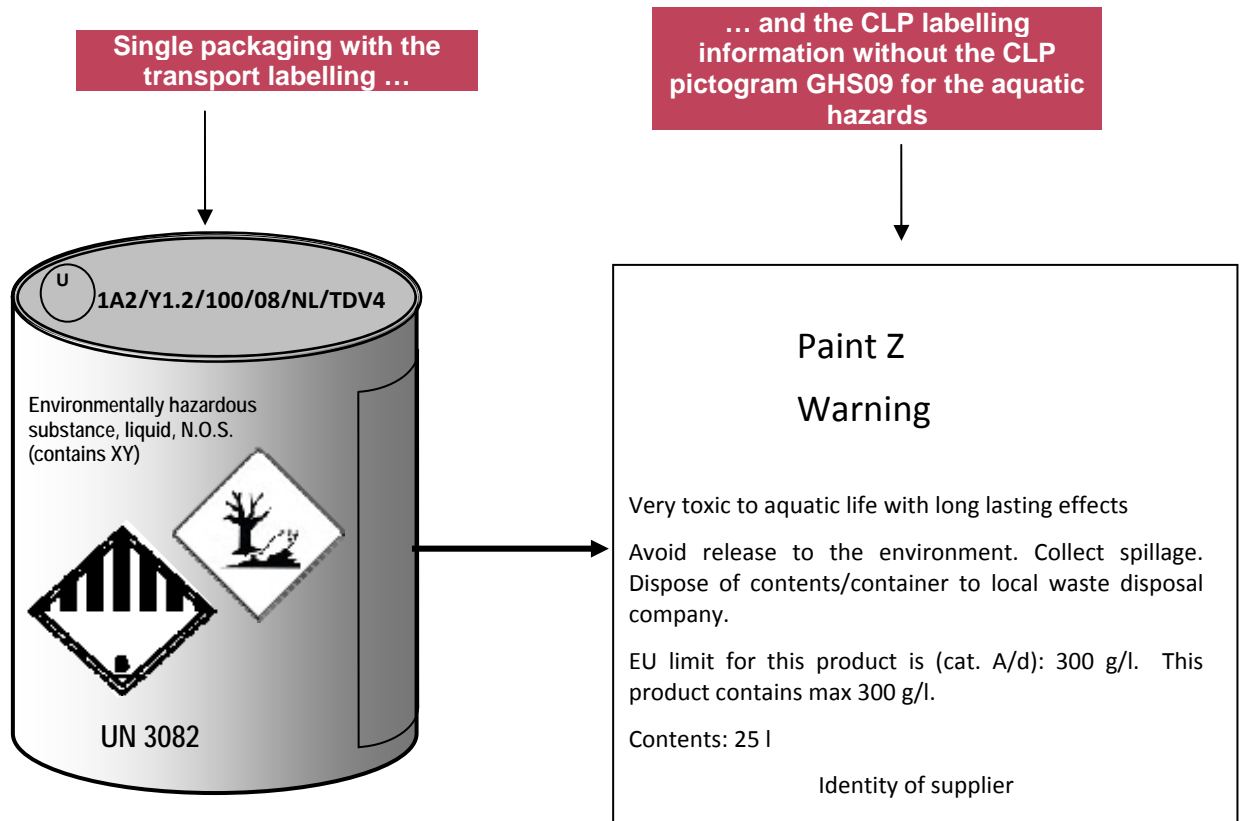
The CLP hazard pictogram may be omitted from the packaging because it relates to the same hazards as the “dead tree – dead fish” transport mark (version 2).

Version 1:



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Version 2:



7. GUIDANCE ON THE SELECTION OF PRECAUTIONARY STATEMENTS FOR THE CLP HAZARD LABEL

7.1 Introduction

Based on the UN GHS, the CLP Regulation assigns precautionary statements to all hazard classes for the purpose of the safe supply and use of a substance or mixture. Based on CLP Article 4, the following suppliers have to select precautionary statements for the CLP hazard label:

- manufacturers or importers of substances,
- importers of mixtures;
- downstream users of substances or mixtures (including formulators),
- distributors (including retailers) of substances or mixtures, and
- producers or importers of explosive articles as defined in Part 2.1 of Annex I to CLP

The selection of precautionary statements shall be done based on CLP Articles 22 and 28 and CLP Annex IV:

Article 22

Precautionary statements

1. The label shall include the relevant precautionary statements.
2. The precautionary statements shall be selected from those set out in the tables in Parts 2 to 5 of Annex I indicating the label elements for each hazard class.
3. The precautionary statements shall be selected in accordance with the criteria laid down in Part 1 of Annex IV taking into account the hazard statements and the intended or identified use or uses of the substance or the mixture.
4. The precautionary statements shall be worded in accordance with Part 2 of Annex IV.

Article 28

Principles of precedence for precautionary statements

1. Where the selection of the precautionary statements results in certain precautionary statements being clearly redundant or unnecessary given the specific substance, mixture or packaging, such statements shall be omitted from the label.
2. Where the substance or mixture is supplied to the general public, one precautionary statement addressing the disposal of that substance or mixture as well as the disposal of packaging shall appear on the label, unless not required under Article 22. In all other cases, a precautionary statement addressing disposal shall not be required, where it is clear that the disposal of the substance or mixture or the packaging does not present a hazard to human health or the environment.
3. Not more than six precautionary statements shall appear on the label, unless necessary to reflect the nature and the severity of the hazards.

Annex IV

In selecting the precautionary statements in accordance with Articles 22 and 28(3), suppliers may combine the precautionary statements in the table [of Annex IV], having regard to clarity and comprehensibility of the precautionary advice. ...

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While there were legally binding selection rules for the safety (S-) phrases under Annex VI to the Dangerous Substances Directive 67/548/EEC (DSD), neither the UN GHS nor the CLP Regulation currently provide for clear-cut rules on how to select precautionary statements for the label, apart from the generic provisions set out in CLP Articles 22 and 28 and the basic instructions specified in the columns containing the conditions for use in tables 6.1-6.5 of Annex IV to CLP. On the other hand, the number of precautionary statements under CLP / GHS has more than doubled when compared to the number of S-phrases under DSD. In a situation where selection rules are missing, an average hazardous substance listed in Annex VI to CLP could easily be assigned more than 20 precautionary statements on the label, based on the hazards of the substance, see also [section 3.4](#) of this document. As CLP requires that normally not more than six precautionary statements shall appear on the label, a substantial reduction of the number of precautionary statements must be performed, based on effective selection rules.

Overall positive experience has been made in the past decades with the use of the S-phrases. The main characteristics of the S-phrase selection system as set out in part 6 of Annex VI to DSD are

- the establishment of a hierarchy (order of precedence) between individual S-phrases indicating that certain phrases may be omitted from the label in case certain others are already assigned;
- a gradation between obligatory and recommended phrases to reflect a particular hazard, taking into account the specific properties of the substance (or mixture), the message already contained in the risk phrase, the intended use(s) of the substance or mixture, practical experience and in some cases also specific target groups;
- the combination of several S-phrases into one phrase only, e.g. S36/37 – Wear suitable protective clothing and gloves.

7.2 Approach to guidance

In view of the positive experience made with the S-phrase selection system, it is proposed to employ a comparable system for the selection of the precautionary statements under CLP. This system should build on the generic provisions set out in CLP Articles 22 and 28 and the basic instructions provided in the columns containing the conditions for use in tables 6.1-6.5 of Annex IV to CLP and which are mentioned directly under the precautionary statements in the selection tables below. In order to establish such a system and to draw on past experience as much as possible, the following approach was chosen:

- The S-phrases from DSD are assigned to the most closely corresponding precautionary statements under CLP;
- The selection rules for the S-phrases as set out in Annex VI to DSD are translated into conditions of use for the precautionary statements as far as possible, on the basis of comparable underlying hazards and of similar wording of the S-phrases and precautionary statements;
- In case such translations are not possible, further conditions for use or adaptations are specified, e.g. “Highly recommended where liquid splashes may occur, e.g. during transfer of cryogenic liquids. In this case the use of safety glasses with side shields and a face shield should be indicated in the Safety Data Sheet.” for P282 for the hazard refrigerated liquefied gases;

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- The UN conditions for use as set out in the tables of Section 3 of Annex 3 to the UN GHS and which are reflected in the “conditions for use” columns in tables 6.1 – 6.5 of Annex IV to the CLP Regulation are taken into account;
- The conditions of use developed in this document distinguish between precautionary statements that are “highly recommended”, “recommended”, “optional” and “not to be used” for the hazard label. A particular recommendation should be seen in the light of the original CLP (UN) conditions for use specified under the pertinent precautionary statement in the selection tables. The target groups “for the general public” and “for industrial/professional users” are specified; where there is no explicit specification of the target group, the conditions for use apply to both the general public and industrial/professional users;
- Where the use of a particular precautionary statement is (highly) recommended but some exemptions are indicated (“unless” condition), it should not be used where the conditions specified in the “unless” clause apply, e.g. P264 for the hazard skin corrosion (skin category 1) should not be used for industrial/professional users where P280 has already been selected for the hazard label of the substance or mixture. Vice versa, where a precautionary statement is only optional, it *should* be used where the conditions specified in the “unless” clause apply, e.g. P410 for the hazard class “Gases under pressure” should be applied in case the described gases are subject to (slow) decomposition or polymerisation;
- Similar to the previous bullet point: where the use of a particular precautionary statement is (highly) recommended under certain conditions only, it should not be used where these conditions do not apply, e.g. P260 should not be used where a skin corrosive substance is not highly volatile;
- For some hazards the use of many specific precautionary statements will normally have to be recommended. As a consequence the number of precautionary statements on the label will easily exceed the target number of six even for simple substances. On the other hand, the label, as compared to the Safety Data Sheet, does not always appear to be the only and most appropriate means to convey a message to industrial/professional users, e.g. for P241 (Use explosion-proof electrical/ventilating/lighting/ .../equipment.). In such cases the guidance also refers to the Safety Data Sheet, typically by phrasing both a recommendation for the label and for the Safety Data Sheet. The recommendation for inclusion on the label is then weaker than for the Safety Data Sheet, see e.g. P241 for flammable liquids or P373 for explosive hazards. In some cases, e.g. for P501 for explosive hazards, it is even recommended to put the relevant precautionary statements in the Safety Data Sheet only, e.g. under heading 13 “disposal considerations” for P501, instead of on the label.
- In relation to the physical hazards it should always be checked whether substances or mixtures displaying these hazards are supplied to or handled by the general public. Where this is not the case, the use of further precautionary statements could be de-prioritised (= weaker recommendation).
- Where it is proposed to combine two or more precautionary statements that could also be used on their own, the conditions of use specify “(highly) recommended, in combination with Pxx”, e.g. “Highly recommended, in combination with P302+P350” for P310 for the hazard acute toxicity dermal, category 1 and 2;

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- Additional guidance is provided for the application of the precautionary statements P101, P102 and P103 for hazardous substances and mixtures supplied to the general public.

The selection tables in section 7.3 follow the format as provided in Section 3 of Annex 3 to the UN GHS; they are arranged according to hazard class and category as appropriate. This approach is different from the format presented in Annex IV to the CLP Regulation but was considered appropriate because it reflects the actual process of assigning precautionary statements based on classification. The original CLP (UN) conditions for use are displayed in black colour (normal letters and italics) under the pertinent precautionary statements in the selection tables below. In contrast, those conditions of use inserted in the tables which constitute EU guidance are marked with an **asterisk bullet ★ and in blue colour**, in order to distinguish them from the original CLP (UN) conditions for use, see also the columns containing the conditions for use in tables 6.1 – 6.5 of Annex IV to the CLP Regulation.

For some hazard classes/-categories the assignment of precautionary statements and corresponding conditions for use is proposed although they are not assigned based on the UN GHS and the CLP Regulation. This applies in most cases to self-reactive substances and mixtures and organic peroxides. The guiding principle for these additional assignments is that the same (response) precautionary statements should be applied to self-reactive substances and mixtures and organic peroxides. Where corresponding assignments and conditions for use are proposed, this is highlighted with the notion “add” after the code for the precautionary statement. It is the goal to introduce these changes at UN level as well.

In selecting the precautionary statements in accordance with the conditions for use set out in the tables, suppliers may combine these statements, having regard to clarity and comprehensibility of the precautionary advice. In this case the specific wording of the component phrases combined shall be retained.

It should be noted that for substances and mixtures which display physical, health and environmental hazard classifications at the same time a selection based on the rules outlined in this guidance may still lead to a final set that exceeds the target number of six statements for the label significantly, see the example of dimethyl zinc below. Even if this could in principle be justified by CLP Article 28(3), the question remains whether the extent of the labelling information is still digestible, in particular where long combination statements appear. However, real-life experience which can lead to further reduction/de-prioritisation is missing at the time when this guidance is drafted. Until this experience has come in, it is proposed to verify with the set that has been selected on the basis of this guidance whether

- Certain prevention and response statements provide more urgent advice than other statements. This judgement can only be done on a case-by-case basis and will strongly depend on the hazards involved;
- Whether to de-select those statements which appear less urgent from the label and put them in the Safety Data Sheet instead.

Where a Safety Sheet must be prepared, the precautionary statements selected for the CLP hazard label have to be included in the Safety Data Sheet, under heading 2.2 (“Labelling elements”), see the (draft) guidance on the compilation of Safety Data Sheets. The de-selected statements can be introduced under the relevant headings of the Safety Data Sheet as well, to provide the industrial or professional user with sufficient information to handle the substance or mixture safely.

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The presentation of these tables is followed by two examples of substances where the selection of precautionary statements for the label is illustrated.

7.3 Selection Tables

7.3.1 General Precautionary Statements

Precautionary Statement
<p>P101</p> <p>If medical advice is needed, have product container or label at hand.</p> <p>- Consumer products</p> <p>★ Highly recommended for all substances and mixtures classified for health hazards and that are sold to the general public”</p>
<p>P102</p> <p>Keep out of reach of children.</p> <p>- Consumer products</p> <p>★ Highly recommended for substances and mixtures sold to the general public, except for those only classified as hazardous to the environment</p>
<p>P103</p> <p>Read label before use.</p> <p>- Consumer products</p> <p>★ Optional, but may be required by other Community legislation</p>

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7.3.2 Specific Precautionary Statements for Physical Hazards

7.3.2.1 Explosives

Hazard category	Signal word	Hazard statement
Unstable explosive	Danger	H200 Unstable explosive



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P201 Obtain special instructions before use. ★ Highly recommended</p> <p>P202 Do not handle until all safety precautions have been read and understood. ★ Optional where P201 has already been assigned</p> <p>P281 Use personal protective equipment as required. ★ Highly recommended</p>	<p>P372 Explosion risk in case of fire. ★ Highly recommended</p> <p>P373 DO NOT fight fire when fire reaches explosives. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P380 Evacuate area. ★ Highly recommended, in combination with P372</p>	<p>P401 Store In accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for inclusion in the Safety Data Sheet. Specify the applicable regulation. (example for the German context: "Gemäß 2. SprengV aufbewahren.")</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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7.3.2.1 Explosives

Hazard category	Signal word	Hazard statement
Division 1.1	Danger	H201 Explosive; mass explosion hazard
Division 1.2	Danger	H202 Explosive; severe projection hazard
Division 1.3	Danger	H203 Explosive; fire, blast or projection hazard



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P230 Keep wetted with Manufacturer/supplier to specify appropriate material. ★ Highly recommended for substances and mixtures which are wetted, diluted, dissolved or suspended with a phlegmatizer in order to reduce or suppress their explosive properties (desensitized explosives). The appropriate material is to be specified.</p>	<p>P370 + P380 In case of fire: evacuate area. ★ Highly recommended</p> <p>P372 Explosion risk in case of fire. ★ Highly recommended, in combination with P370+P380: Explosion risk in case of fire: evacuate area</p> <p>P373 DO NOT fight fire when fire reaches explosives. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p>	<p>P401 Store In accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for inclusion in the Safety Data Sheet. Specify the applicable regulation. (example for the German context: “Gemäß 2. SprengV aufbewahren.”)</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P240</p> <p>Ground/bond container and receiving equipment.</p> <p>- if the explosive is electrostatically sensitive.</p> <ul style="list-style-type: none"> ★ Optional unless other considerations deem it necessary ★ Recommended for inclusion in the SDS <p>P250</p> <p>Do not subject to grinding/shock.../friction.</p> <p>... Manufacturer/supplier to specify applicable rough handling.</p> <ul style="list-style-type: none"> ★ Highly recommended if the explosive is mechanically sensitive ★ Optional for other explosives than those mentioned above <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of</p>			

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>equipment. - <i>specify face protection.</i></p> <ul style="list-style-type: none"> ★ Protective gloves/protective clothing/eye protection highly recommended for industrial/professional users ★ Face protection highly recommended for industrial/professional users where articles are able to form hazardous fragments ★ Optional for explosives supplied to the general public <p>P234 (add) Keep only in original container.</p> <ul style="list-style-type: none"> ★ Highly recommended 			

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7.3.2.1 Explosives

Hazard category	Signal word	Hazard statement
Division 1.4	Warning	H204 Fire or projection hazard

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P240 Ground/bond container and receiving equipment. - if the explosive is electrostatically sensitive. ★ Optional unless other considerations deem it necessary ★ Recommended for inclusion in the Safety Data Sheet</p> <p>P250 Do not subject to grinding/shock/.../friction.</p>	<p>P370 + P380 In case of fire: Evacuate area. ★ Highly recommended</p> <p>P372 Explosion risk in case of fire. - except if explosives are 1.4S AMMUNITION AND COMPONENTS THEREOF. ★ Highly recommended, except for division 1.4S, in combination with P370+P380: Explosion risk in case of fire: evacuate area</p> <p>P373 DO NOT fight fire when fire reaches explosives. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p>	<p>P401 Store In accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for inclusion in the Safety Data Sheet. Specify the applicable regulation. (example for the German context: "Gemäß 2. SprengV aufbewahren.")</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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<p>... Manufacturer/supplier or the competent authority to specify applicable rough handling.</p> <ul style="list-style-type: none"> ★ Highly recommended if the explosive is mechanically sensitive ★ Optional for other explosives than those mentioned above <p>P280</p> <p>Wear protective gloves/protective clothing/ eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify face protection.</i></p> <ul style="list-style-type: none"> ★ Protective gloves/protective clothing/eye protection highly recommended for industrial / professional users ★ Face protection highly recommended for industrial / professional users where articles are able to form hazardous fragments ★ Optional for explosives supplied to the general public <p>P234 (add)</p> <p>Keep only in original container.</p> <ul style="list-style-type: none"> ★ Highly recommended 	<p>P374</p> <p>Fight fire with normal precautions from a reasonable distance.</p> <p>If explosives are 1.4S AMMUNITION AND COMPONENTS THEREOF.</p> <ul style="list-style-type: none"> ★ Highly recommended for division 1.4S 		
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7.3.2.1 Explosives

Hazard category	Signal word	Hazard statement
Division 1.5	Danger	H205 May mass explode in fire

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P230 Keep wetted with Manufacturer/supplier to specify appropriate material. <i>- if drying out increases explosion hazard, except as needed for manufacturing or operating processes (e.g. nitrocellulose).</i> ★ Highly recommended for substances and mixtures which are wetted, diluted, dissolved or suspended with a phlegmatiser in order to reduce or suppress their explosive properties (desensitized explosives). The</p>	<p>P370 + P380 In case of fire: Evacuate area. ★ Highly recommended</p> <p>P372 Explosion risk in case of fire. ★ Highly recommended</p> <p>P373 DO NOT fight fire when fire reaches explosives. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p>	<p>P401 Store In accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for inclusion in the Safety Data Sheet. Specify the applicable regulation (example for the German context: "Gemäß 2. SprengV aufbewahren.")</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>appropriate material is to be specified.</p> <p>P240</p> <p>Ground/bond container and receiving equipment.</p> <p>- if the explosive is electrostatically sensitive.</p> <ul style="list-style-type: none"> ★ Optional unless other considerations deem it necessary ★ Recommended for inclusion in the Safety Data Sheet <p>P250</p> <p>Do not subject to grinding/shock/.../friction.</p> <p>... Manufacturer/supplier or the competent authority to specify applicable rough handling.</p> <ul style="list-style-type: none"> ★ Highly recommended if the explosive is mechanically sensitive ★ Optional for other explosives than those mentioned above <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/face</p>			

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>protection. Manufacturer/supplier to specify type of equipment. - <i>specify face protection.</i></p> <ul style="list-style-type: none"> ★ Protective gloves/protective clothing/eye protection highly recommended for industrial / professional users ★ Face protection highly recommended for industrial / professional users where articles are able to form hazardous fragments ★ Optional for explosives supplied to the general public <p>P234 (add) Keep only in original container.</p> <ul style="list-style-type: none"> ★ Highly recommended 			

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7.3.2.2 Flammable Gases

Hazard category	Signal word	Hazard statement
1	Danger	H220 Extremely flammable gas
2	Warning	H221 Flammable gas



For hazard category 1

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p>	<p>P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. ★ Highly recommended</p> <p>P381 Eliminate all ignition sources if safe to do so. ★ Recommended</p>	<p>P403 Store in well-ventilated place. ★ Highly recommended</p>	

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7.3.2.3 Flammable Aerosols

Hazard category	Signal word	Hazard statement
1	Danger	H222 Extremely flammable aerosol
2	Warning	H223 Flammable aerosol



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210</p> <p>Keep away from heat/sparks/open flames/hot surfaces. – No smoking.</p> <p>Manufacturer/supplier to specify applicable ignition source(s).</p> <p>★ Highly recommended, unless a similar statement is assigned in accordance with Directive 75/324/EEC</p> <p>P211</p> <p>Do not spray on open flame or other ignition source.</p> <p>★ Highly recommended, unless a similar statement is assigned in accordance with Directive 75/324/EEC</p> <p>P251</p> <p>Pressurized container: Do not pierce or burn, even after use.</p> <p>★ Highly recommended, unless a similar statement is assigned in accordance with Directive 75/324/EEC</p>		<p>P410 + P412</p> <p>Protect from sunlight. Do not expose to temperatures exceeding 50° C / 122° F.</p> <p>★ Highly recommended, unless a similar statement is assigned in accordance with Directive 75/324/EEC</p>	

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7.3.2.4 Oxidising Gases

Hazard category	Signal word	Hazard statement
1	Danger	H270 May cause or intensify fire; oxidizer

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify other incompatible materials. ★ Highly recommended</p> <p>P244 Keep reduction valves free from grease and oil. ★ Highly recommended</p> <p>Note that this statement might be reworded as Keep valves and fittings free from oil and grease, in accordance with the 4th revised edition of the UN GHS</p>	<p>P370 + P376 In case of fire: Stop fire if safe to do so. ★ Optional ★ Recommended for inclusion in the Safety Data Sheet.</p>	<p>P403 Store in a well-ventilated place. ★ Highly recommended</p>	

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7.3.2.5 Gases under Pressure

Hazard category	Signal word	Hazard statement
Compressed gas	Warning	H280 Contains gas under pressure; may explode if heated
Liquefied gas	Warning	H280 Contains gas under pressure; may explode if heated
Dissolved gas	Warning	H280 Contains gas under pressure; may explode if heated



Precautionary Statements			
Prevention	Response	Storage	Disposal
		P410 + P403 Protect from sunlight. Store in a well-ventilated place. ★ P410: Optional for gases filled in transportable gas cylinders in accordance with packing instruction P200 of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, unless those gases are subject to (slow) decomposition or polymerisation ★ P403: Optional	

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7.3.2.5 Gases under Pressure

Hazard category	Signal word	Hazard statement
Refrigerated liquefied gas	Warning	H281 Contains refrigerated gas; may cause cryogenic burns or injury



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P282</p> <p>Wear cold insulating gloves/face shield/eye protection.</p> <p>★ Highly recommended where liquid splashes may occur, e.g. during transfer of cryogenic liquids. In this case the use of safety glasses with side shields and a face shield should be indicated in the Safety Data Sheet.</p>	<p>P336</p> <p>Thaw frosted parts with lukewarm water. Do not rub affected area.</p> <p>★ Highly recommended</p> <p>P315</p> <p>Get immediate medical advice/attention.</p> <p>★ Recommended, in combination with P336</p>	<p>P403</p> <p>Store in a well-ventilated place.</p> <p>★ Optional</p>	

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7.3.2.6 Flammable Liquids

Hazard category	Signal word	Hazard statement
1	Danger	H224 Extremely flammable liquid and vapour.
2	Danger	H225 Highly flammable liquid and vapour.
3	Warning	H226 Flammable liquid and vapour.



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P233 Keep container tightly closed. ★ Highly recommended for category 1, unless P404 has already been assigned ★ Recommended for category 2, unless P404 has already been assigned ★ Optional for category 3 ★ Recommended if product is volatile so as to generate a potentially explosive atmosphere, unless P404 has already been assigned</p>	<p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. ★ Optional unless deemed necessary, e.g. due to the risk of generating a potentially explosive atmosphere</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. - if water increases risk. ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>	<p>P403 + P235 Store in a well-ventilated place. Keep cool. ★ Highly recommended for flammable liquids category 1 and other liquids that are volatile so as to generate a potentially explosive atmosphere</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. . It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P240</p> <p>Ground/bond container and receiving equipment.</p> <p><i>- if electrostatically sensitive material is for reloading.</i></p> <p><i>- If product is volatile so as to generate hazardous atmosphere.</i></p> <p>★ Optional unless other considerations deem it necessary</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p> <p>P241</p> <p>Use explosion-proof electrical/ventilating/lighting/.../equipment.</p> <p>... Manufacturer/supplier to specify other equipment.</p> <p>★ Optional unless other considerations deem it necessary</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p> <p>P242</p> <p>Use only non-sparking tools.</p> <p>★ Optional unless other considerations</p>			

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>deem it necessary</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p> <p>P243</p> <p>Take precautionary measures against static discharge.</p> <p>★ Optional unless other considerations deem it necessary</p> <p>★ Recommended for inclusion in the SDS</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <p>★ Optional</p>			

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7.3.2.7 Flammable Solids

Hazard category	Signal word	Hazard statement
1	Danger	H228 Flammable solid
2	Warning	H228 Flammable solid

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210</p> <p>Keep away from heat/sparks/open flames/hot surfaces. – No smoking.</p> <p>Manufacturer/supplier to specify applicable ignition source(s).</p> <p>★ Highly recommended</p> <p>P240</p> <p>Ground/bond container and receiving equipment.</p> <p>- if electrostatically sensitive material is for reloading.</p> <p>★ Optional unless other considerations deem it necessary</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p> <p>P241</p> <p>Use explosion-proof electrical/ventilating/lighting/.../equipment.</p> <p>... Manufacturer/supplier to specify other equipment.</p>	<p>P370 + P378</p> <p>In case of fire: Use ... for extinction.</p> <p>... Manufacturer/supplier to specify appropriate media.</p> <p>- if water increases risk.</p> <p>★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>		

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>- if dust clouds can occur.</p> <ul style="list-style-type: none"> ★ Optional unless other considerations deem it necessary ★ Recommended for inclusion in the Safety Data Sheet <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <ul style="list-style-type: none"> ★ Optional 			

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7.3.2.8 Self-Reactive Substances and Mixtures

Hazard category	Signal word	Hazard statement
Type A	Danger	H240 Heating may cause an explosion

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify other incompatible materials. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P234 Keep only in original container.</p>	<p>P370 + P378 In case of fire: Use ... for extinction. Manufacturer/supplier to specify appropriate media. - if water increases risk. ★ Normally not to be used due to the risk of explosion</p> <p>P370 + P380 + P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. ★ Highly recommended to use P370+P380 only; P375 not to be used</p>	<p>P403 + P235 Store in a well-ventilated place. Keep cool. ★ P403: Highly recommended ★ P235: Highly recommended, in combination with P403, unless P411 has already been assigned</p> <p>P411 Store at temperatures not exceeding ...° C / ...° F. ... Manufacturer/supplier to specify temperature. ★ Highly recommended if SADT ≤ 50 °C or if otherwise deemed necessary, in combination</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>★ Highly recommended where the container is important for preventing or suppressing the effect of dangerous reactions or explosion</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <p>★ Highly recommended</p>		<p style="text-align: center;">with P403</p> <p>P420</p> <p>Store away from other materials.</p> <p>★ Recommended where incompatible materials are likely to produce a particular risk. If this statement is used, text clarifying the incompatible materials should be added as supplemental information.</p> <p>★ Optional where P220 has already been assigned</p>	

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7.3.2.8 Self-Reactive Substances and Mixtures

Hazard category	Signal word	Hazard statement
Type B	Danger	H241 Heating may cause a fire or explosion



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify other incompatible materials. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P234 Keep only in original container. ★ Highly recommended</p>	<p>P370 + P378 In case of fire: Use ... for extinction. Manufacturer/supplier to specify appropriate media. <i>- if water increases risk.</i> ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p> <p>P370 + P380 + P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. ★ Highly recommended</p>	<p>P403 + P235 Store in a well-ventilated place. Keep cool. ★ P403: Highly recommended ★ P235: Highly recommended, in combination with P403, unless P411 has already been assigned</p> <p>P411 Store at temperatures not exceeding ...° C / ...° F. ... Manufacturer/supplier to specify temperature. ★ Highly recommended if SADT ≤ 50 °C or if otherwise deemed necessary, in combination with P403</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <ul style="list-style-type: none"> - <i>specify protective gloves and eye/face protection.</i> ★ Highly recommended 		<p>P420</p> <p>Store away from other materials.</p> <ul style="list-style-type: none"> ★ Recommended where incompatible materials are likely to produce a particular risk. If this statement is used, text clarifying the incompatible materials should be added as supplemental information ★ Optional where P220 has already been assigned 	

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7.3.2.8 Self-Reactive Substances and Mixtures

Hazard category	Signal word	Hazard statement
Type C	Danger	H242 Heating may cause a fire
Type D	Danger	H242 Heating may cause a fire
Type E	Warning	H242 Heating may cause a fire
Type F	Warning	H242 Heating may cause a fire



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify other incompatible materials. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P234</p>	<p>P370 + P378 In case of fire: Use ... for extinction. Manufacturer/supplier to specify appropriate media. - if water increases risk. ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>	<p>P403 + P235 Store in a well-ventilated place. Keep cool. ★ P403: Highly recommended ★ P235: Highly recommended, in combination with P403, unless P411 has already been assigned</p> <p>P411 Store at temperatures not exceeding ...°C / ...°F. ... Manufacturer/supplier to specify temperature. ★ Highly recommended if SADT ≤ 50 °C or if</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>Keep only in original container.</p> <p>★ Highly recommended</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <p>★ Highly recommended</p>		<p>otherwise deemed necessary, in combination with P403.</p> <p>P420</p> <p>Store away from other materials.</p> <p>★ Recommended where incompatible materials are likely to produce a particular risk. If this statement is used, text clarifying the incompatible materials should be added as supplemental information</p> <p>★ Optional where P220 has already been assigned</p>	

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7.3.2.9 Pyrophoric Liquids

Hazard category	Signal word	Hazard statement
1	Danger	H250 Catches fire spontaneously if exposed to air

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P222 Do not allow contact with air. ★ Optional unless emphasis of the hazard statement is desired</p> <p>P280 Wear protective gloves/protective clothing/eye protection/ face protection. Manufacturer/supplier to specify type of equipment. - specify protective gloves and eye/face protection.</p>	<p>P302 + P334 IF ON SKIN: Immerse in cool water/wrap in wet bandages. ★ Highly recommended</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. - if water increases risk. ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>	<p>P422 Store contents under Manufacturer/supplier to specify appropriate liquid or inert gas. ★ Recommended if a specific inert gas or liquid is required, unless P231 has already been assigned ★ Highly recommended for inclusion in the Safety Data Sheet</p>	

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<ul style="list-style-type: none">★ Highly recommended <p>P231 (add)</p> <p>Handle under inert gas.</p> <ul style="list-style-type: none">★ Recommended, unless P422 has already been assigned★ Highly recommended for inclusion in the Safety Data Sheet			
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7.3.2.10 Pyrophoric Solids

Hazard category	Signal word	Hazard statement
1	Danger	H250 Catches fire spontaneously if exposed to air

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P222 Do not allow contact with air. ★ Optional unless emphasis of the hazard statement is desired</p> <p>P280 Wear protective gloves/protective clothing/eye protection/ face protection. Manufacturer/supplier to specify type of equipment. - <i>specify protective gloves and eye/face protection.</i> ★ Highly recommended</p>	<p>P335 + P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. ★ Highly recommended</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. - <i>if water increases risk.</i> ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>	<p>P422 Store contents under Manufacturer/supplier to specify appropriate liquid or inert gas. ★ Recommended if a specific inert gas or liquid is required, unless P231 has already been assigned ★ Highly recommended for inclusion in the Safety Data Sheet</p>	

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<p>P231 (add)</p> <p>Handle under inert gas.</p> <ul style="list-style-type: none">★ Recommended, unless P422 has already been assigned★ Highly recommended for inclusion in the Safety Data Sheet			
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7.3.2.11 Self-Heating Substances and Mixtures

Hazard category	Signal word	Hazard statement
1	Danger	H251 Self-heating; may catch fire
2	Warning	H252 Self-heating in large quantities; may catch fire

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P235 + P410 Keep cool. Protect from sunlight.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial/professional users if P413 has already been assigned <p>P280 Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <ul style="list-style-type: none"> ★ Optional 		<p>P407 Maintain air gap between stacks/pallets.</p> <ul style="list-style-type: none"> ★ Highly recommended <p>P413 Store bulk masses greater than kg/...lbs at temperatures not exceeding ...° C / ...° F.</p> <p>... Manufacturer/supplier to specify mass and temperature.</p> <ul style="list-style-type: none"> ★ Highly recommended if the manufacturer has specific information <p>P420 Store away from other materials.</p> <ul style="list-style-type: none"> ★ Recommended where incompatible materials are likely to produce a particular risk. If this statement is used, text clarifying the incompatible materials should be added as supplemental information ★ Optional where P220 has already been assigned 	

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7.3.2.12 Substances and mixtures which, in contact with water, emit flammable gases



Hazard category	Signal word	Hazard statement
1	Danger	H260 In contact with water releases flammable gases, which may ignite spontaneously
2	Danger	H261 In contact with water releases flammable gas

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.</p> <p>★ Optional unless emphasis of the hazard statement is desired</p> <p>P231 + P232 Handle under inert gas. Protect from moisture.</p> <p>★ Highly recommended for substances and mixtures which react readily with moisture in air, where special emphasis is required</p> <p>P280 Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- specify protective gloves and eye/face protection.</p> <p>★ Recommended</p>	<p>P335 + P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.</p> <p>★ Highly recommended but do not use the phrase “wrap in wet bandages”</p> <p>P370 + P378 In case of fire: Use ... for extinction.</p> <p>... Manufacturer/supplier to specify appropriate media.</p> <p>- if water increases risk.</p> <p>★ Highly recommended if specific extinction media are required or appropriate</p>	<p>P402 + P404 Store in a dry place. Store in a closed container.</p> <p>★ Recommended, unless P231 has already been assigned</p> <p>★ Highly recommended for inclusion in the Safety Data Sheet</p>	<p>P501 Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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7.3.2.12 Substances and mixtures which, in contact with water, emit flammable gases

Hazard category	Signal word	Hazard statement
3	Warning	H261 In contact with water releases flammable gas



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P231 + P232 Handle under inert gas. Protect from moisture.</p> <p>★ Highly recommended for substances and mixtures which react readily with moisture in air, where special emphasis is required</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- specify protective gloves and eye/face protection.</p> <p>★ Recommended</p>	<p>P370 + P378 In case of fire: Use ... for extinction.</p> <p>... Manufacturer/supplier to specify appropriate media.</p> <p>- if water increases risk.</p> <p>★ Highly recommended if specific extinction media are required or appropriate</p>	<p>P402 + P404 Store in a dry place. Store in a closed container.</p> <p>★ Recommended, unless P231 has already been assigned</p> <p>★ Highly recommended for inclusion in the Safety Data Sheet</p>	<p>P501 Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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7.3.2.13 Oxidising Liquids

Hazard category	Signal word	Hazard statement
1	Danger	H271 May cause fire or explosion; strong oxidizer

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat. ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../ combustible materials. ... Manufacturer/supplier to specify incompatible materials. - <i>specify to keep away from clothing as well as other incompatible materials.</i> ★ Optional where P221 has already been assigned ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P221 Take any precaution to avoid mixing with combustibles/...</p>	<p>P306 + P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. ★ Recommended</p> <p>P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. ★ Highly recommended</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media.</p>		<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>... Manufacturer/supplier to specify incompatible materials.</p> <p>★ Highly recommended</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <p>★ Recommended</p> <p>P283</p> <p>Wear fire/flame resistant/retardant clothing.</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p>	<p>- if water increases risk.</p> <p>★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>		

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7.3.2.13 Oxidising Liquids

Hazard category	Signal word	Hazard statement
2	Danger	H272 May intensify fire; oxidizer
3	Warning	H272 May intensify fire; oxidizer



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat. ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../ combustible materials. ... Manufacturer/supplier to specify incompatible materials. ★ Optional where P221 has already been assigned ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P221 Take any precaution to avoid mixing with combustibles/... ... Manufacturer/supplier to specify incompatible</p>	<p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. <i>- if water increases risk.</i> ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>		<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>materials.</p> <p>★ Highly recommended</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <ul style="list-style-type: none"> - <i>specify protective gloves and eye/face protection.</i> <p>★ Recommended</p>			

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7.3.2.14 Oxidising Solids

Hazard category	Signal word	Hazard statement
1	Danger	H271 May cause fire or explosion; strong oxidizer

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat. ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify incompatible materials. - <i>specify to keep away from clothing as well as other incompatible materials.</i> ★ Optional where P221 has already been assigned ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P221 Take any precaution to avoid mixing with combustibles/... ... Manufacturer/supplier to specify incompatible</p>	<p>P306 + P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. ★ Recommended</p> <p>P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. ★ Highly recommended</p> <p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. - <i>if water increases risk.</i> ★ Highly recommended if specific extinction media are required or</p>		<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>materials.</p> <p>★ Highly recommended</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <p>★ Recommended</p> <p>P283</p> <p>Wear fire/flame resistant/retardant clothing.</p> <p>★ Recommended</p> <p>P283</p> <p>Wear fire/flame resistant/retardant clothing.</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p>	<p>appropriate, e.g. if water is ineffective or if water increases risk</p>		

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7.3.2.14 Oxidising Solids

Hazard category	Signal word	Hazard statement
2	Danger	H272 May intensify fire; oxidizer
3	Warning	H272 May intensify fire; oxidizer

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat. ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../ combustible materials. ... Manufacturer/supplier to specify incompatible materials. ★ Optional where P221 has already been assigned</p> <p>P221 Take any precaution to avoid mixing with combustibles/... ... Manufacturer/supplier to specify incompatible materials. ★ Highly recommended</p> <p>P280 Wear protective gloves/protective clothing/eye</p>	<p>P370 + P378 In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. <i>- if water increases risk.</i> ★ Highly recommended if specific extinction media are required or appropriate</p>		<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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<p>protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <ul style="list-style-type: none">- <i>specify protective gloves and eye/face protection.</i> <p>★ Recommended</p>			
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7.3.2.15 Organic Peroxides

Hazard category	Signal word	Hazard statement
Type A	Danger	H240 Heating may cause an explosion

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify other incompatible materials. ★ Recommended ★ Highly recommended for inclusion in the Safety Data Sheet</p> <p>P234 Keep only in original container. ★ Highly recommended where the container is important for preventing or</p>	<p>P370 + P380 (add) In case of fire: Evacuate area. ★ Highly recommended</p>	<p>P411 + P235 Store at temperatures not exceeding ...°C / ...°F. Keep cool. ... Manufacturer/supplier to specify temperature. ★ P411: Highly recommended if SADT ≤ 50 °C or if otherwise deemed necessary, in combination with P403 ★ P235: Highly recommended for other cases, in combination with P403</p> <p>P403 (add) Store in a well-ventilated place. ★ Highly recommended, in combination with P411 or P235</p> <p>P410 Protect from sunlight. ★ Optional if P411 or P235 has already been assigned</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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<p>suppressing the effect of dangerous reactions or explosion</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <p>★ Highly recommended</p>		<p>P420</p> <p>Store away from other materials.</p> <ul style="list-style-type: none"> ★ Recommended where incompatible materials are likely to produce a particular risk. If this statement is used, text clarifying the incompatible materials should be added as supplemental information ★ Optional where P220 has already been assigned 	
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7.3.2.15 Organic Peroxides

Hazard category

Signal word

Hazard statement0

Type B

Danger

H241 Heating may cause a fire or explosion



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify other incompatible materials. ★ Recommended</p> <p>P234 Keep only in original container. ★ Highly recommended</p> <p>P280 Wear protective gloves/protective</p>	<p>P370 + P380 + P375 (add) In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. ★ Highly recommended</p> <p>P370 + P378 (add) In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. <i>- if water increases risk.</i> ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>	<p>P411 + P235 Store at temperatures not exceeding ...° C / ...° F. Keep cool. ... Manufacturer/supplier to specify temperature. ★ P411: Highly recommended if SADT ≤ 50 °C or if otherwise deemed necessary, in combination with P403 ★ P235: Highly recommended for other cases, in combination with P403</p> <p>P403 (add) Store in a well-ventilated place. ★ Highly recommended, in combination with P411 or P235</p> <p>P410 Protect from sunlight.</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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<p>clothing/eye protection/ face protection. Manufacturer/supplier to specify type of equipment.</p> <ul style="list-style-type: none"> - <i>specify protective gloves and eye/face protection.</i> <p>★ Highly recommended</p>		<ul style="list-style-type: none"> ★ Optional if P411 or P235 has already been assigned <p>P420</p> <p>Store away from other materials.</p> <ul style="list-style-type: none"> ★ Recommended where incompatible materials are likely to produce a particular risk. If this statement is used, text clarifying the incompatible materials should be added as supplemental information ★ Optional where P220 has already been assigned 	
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7.3.2.15 Organic Peroxides

Hazard category	Signal word	Hazard statement
Type C	Danger	H242 Heating may cause a fire
Type D	Danger	H242 Heating may cause a fire
Type E	Warning	H242 Heating may cause a fire
Type F	Warning	H242 Heating may cause a fire



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Manufacturer/supplier to specify applicable ignition source(s). ★ Highly recommended</p> <p>P220 Keep/Store away from clothing/.../combustible materials. ... Manufacturer/supplier to specify other incompatible materials. ★ Recommended</p> <p>P234 Keep only in original container.</p>	<p>P370 + P378 (add) In case of fire: Use ... for extinction. ... Manufacturer/supplier to specify appropriate media. - if water increases risk. ★ Highly recommended if specific extinction media are required or appropriate, e.g. if water is ineffective or if water increases risk</p>	<p>P411 + P235 Store at temperatures not exceeding ...° C / ...° F. Keep cool. ... Manufacturer/supplier to specify temperature. ★ P411: Highly recommended if SADT ≤ 50 °C or if otherwise deemed necessary, in combination with P403 ★ P235: Highly recommended for other cases, in combination with P403</p> <p>P403 (add) Store in a well-ventilated place. ★ Highly recommended, in combination with P411 or P235</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>★ Highly recommended</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/ face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>specify protective gloves and eye/face protection.</i></p> <p>★ Highly recommended</p>		<p>P410</p> <p>Protect from sunlight.</p> <p>★ Optional if P411 or P235 has already been assigned</p> <p>P420</p> <p>Store away from other materials.</p> <p>★ Recommended where incompatible materials are likely to produce a particular risk. If this statement is used, text clarifying the incompatible materials should be added as supplemental information</p> <p>★ Optional where P220 has already been assigned</p>	

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7.3.2.16 Corrosive to Metals

Hazard category	Signal word	Hazard statement
1	Warning	H290 May be corrosive to metals



Precautionary Statements			
Prevention	Response	Storage	Disposal
P234 Keep only in original container. ★ Recommended for the general public ★ Optional for industrial / professional users ★ Recommended for inclusion in the Safety Data Sheet	P390 Absorb spillage to prevent material damage. ★ Recommended	P406 Store in a corrosive resistant/... container with a resistant inner liner. ... Manufacturer/supplier to specify other compatible materials. ★ Optional ★ Do not use if P234 has already been assigned	

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7.3.3 Specific Precautionary Statements for Health Hazards

7.3.3.1 Acute Toxicity - Oral

Hazard category	Signal word	Hazard statement
1	Danger	H300 Fatal if swallowed
2	Danger	H300 Fatal if swallowed
3	Danger	H301 Toxic if swallowed



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P264</p> <p>Wash ... thoroughly after handling.</p> <p>Manufacturer / supplier to specify parts of the body to be washed after handling.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Recommended for industrial / professional users unless P280 has already been assigned <p>P270</p> <p>Do not eat, drink or smoke when using this product.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public for categories 1 and 2 ★ Recommended for the general public 	<p>P301 + P310</p> <p>IF SWALLOWED: Immediately call a POISON Center or doctor/physician.</p> <ul style="list-style-type: none"> ★ Highly recommended <p>P321</p> <p>Specific treatment (see ... on this label).</p> <p>... Reference to supplemental first aid instruction.</p> <p>- if immediate administration of antidote is required.</p> <ul style="list-style-type: none"> ★ Highly recommended only in exceptional cases where specific treatment, including the administration of an antidote, is urgently required 	<p>P405</p> <p>Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary 	<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/ regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>for category 3</p> <ul style="list-style-type: none"> ★ Optional for industrial / professional users ★ Recommended for inclusion in the Safety Data Sheet 	<p>P330</p> <p>Rinse mouth.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public for categories 1 and 2 unless P301+P330+P331 has already been assigned ★ Recommended for the general public for category 3 unless P301+P330+P331 has already been assigned ★ Recommended for industrial / professional users for categories 1 and 2 unless P301+P330+P331 has already been assigned ★ Optional for industrial / professional users for category 3 		<p>above the normal expectation for the disposal of chemicals. . It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>

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7.3.3.1 Acute Toxicity - Oral

Hazard category	Signal word	Hazard statement
4	Warning	H302 Harmful if swallowed

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P264</p> <p>Wash ... thoroughly after handling.</p> <p>Manufacturer/supplier to specify parts of the body to be washed after handling.</p> <ul style="list-style-type: none"> ★ Recommended for the general public ★ Optional for industrial / professional users <p>P270</p> <p>Do not eat, drink or smoke when using this product.</p> <ul style="list-style-type: none"> ★ Recommended for the general public ★ Optional for industrial / professional users ★ Recommended for inclusion in the Safety Data Sheet 	<p>P301 + P312</p> <p>IF SWALLOWED: Call a POISON Center or doctor/physician if you feel unwell.</p> <ul style="list-style-type: none"> ★ Optional <p>P330</p> <p>Rinse mouth.</p> <ul style="list-style-type: none"> ★ Optional 		<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified)</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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7.3.3.1 Acute Toxicity - Dermal

Hazard category	Signal word	Hazard statement
1	Danger	H310 Fatal in contact with skin
2	Danger	H310 Fatal in contact with skin



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P262 Do not get in eyes, on skin, or on clothing. ★ Highly recommended unless P280 has already been assigned</p> <p>P264 Wash ... thoroughly after handling. Manufacturer / supplier to specify parts of the body to be washed after handling. ★ Highly recommended for the general public ★ Highly recommended for industrial / professional users unless P280 has already been assigned</p> <p>P270 Do not eat, drink or smoke when using this product. ★ Highly recommended for the general public ★ Optional for industrial / professional users.</p>	<p>P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water ★ Recommended for the general public ★ Recommended for inclusion in the Safety Data Sheet</p> <p>P310 Immediately call a POISON CENTER or doctor/physician. ★ Highly recommended, in combination with P302+P350</p> <p>P322 Specific measures (see ... on this label). ... Reference to supplemental first aid instruction. - if immediate measures such as</p>	<p>P405 Store locked up. ★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for inclusion in the Safety Data Sheet if there are specific disposal requirements above the normal expectation for the disposal of chemicals. Specify the applicable regulation.</p>

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<p>★ Recommended for inclusion in the Safety Data Sheet</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>Specify protective gloves/clothing.</i></p> <p>★ Highly recommended</p>	<p><i>specific cleansing agent is advised.</i></p> <p>★ Highly recommended only in exceptional cases where specific measures are required</p> <p>P361</p> <p>Remove/Take off immediately all contaminated clothing.</p> <p>★ Highly recommended, unless P280 has already been assigned</p> <p>P363</p> <p>Wash contaminated clothing before reuse.</p> <p>★ Recommended</p>		
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7.3.3.1 Acute Toxicity - Dermal

Hazard category	Signal word	Hazard statement
3	Danger	H311 Toxic in contact with skin

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P280</p> <p>Wear protective gloves / protective clothing / eye protection / face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- Specify protective gloves/clothing.</p> <p>★ Highly recommended</p>	<p>P302 + P352</p> <p>IF ON SKIN: Wash with plenty of soap and water</p> <p>★ Recommended for the general public</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p> <p>P312</p> <p>Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>★ Recommended unless P310, P311 or P313 has already been assigned</p> <p>P322</p> <p>Specific measures (see ... on this label).</p> <p>... Reference to supplemental first aid instruction.</p> <p>- if measures such as specific cleansing agent is advised.</p> <p>★ Highly recommended only in exceptional cases where specific measures are required</p>	<p>P405</p> <p>Store locked up.</p> <p>★ Highly recommended for the general public</p> <p>★ Optional for industrial / professional users unless other considerations deem it necessary</p>	<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>

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	<p>P361 Remove/Take off immediately all contaminated clothing.</p> <p>★ Recommended, unless P280 has already been assigned</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>★ Optional</p>		
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7.3.3.1 Acute Toxicity - Dermal

Hazard category	Signal word	Hazard statement
4	Warning	H312 Harmful in contact with skin

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P280</p> <p>Wear protective gloves / protective clothing / eye protection / face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>Specify protective gloves/clothing.</i></p> <p>★ Recommended</p>	<p>P302 + P352</p> <p>IF ON SKIN: Wash with plenty of soap and water</p> <p>★ Optional</p> <p>P312</p> <p>Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>★ Recommended unless P310, P311 or P313 has already been assigned</p> <p>P322</p> <p>Specific measures (see ... on this label).</p> <p>... Reference to supplemental first aid instruction.</p> <p>- <i>if measures such as specific cleansing agent is advised.</i></p> <p>★ Highly recommended only in exceptional cases where specific measures are required</p> <p>P363</p> <p>Wash contaminated clothing before reuse.</p> <p>★ Optional</p>		<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>

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7.3.3.1 Acute Toxicity - Inhalation

Hazard category	Signal word	Hazard statement
1	Danger	H330 Fatal if inhaled
2	Danger	H330 Fatal if inhaled

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P260 Do not breathe dust/fume/gas/mist/vapours/spray. Manufacturer/supplier to specify applicable conditions.</p> <p>★ Highly recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>★ Highly recommended for the general public ★ Optional for industrial/professional users</p> <p>P284 Wear respiratory protection. Manufacturer/supplier to specify equipment.</p> <p>★ Recommended where the substance /</p>	<p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. ★ Highly recommended</p> <p>P310 Immediately call a POISON CENTER or doctor/physician. ★ Highly recommended, in combination with P304+P340</p> <p>P320 Specific treatment is urgent (see ... on this label) ... Reference to supplemental first aid instruction. - <i>if immediate administration of antidote is required</i> ★ Highly recommended only in</p>	<p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed. - <i>if product is volatile so as to generate hazardous atmosphere.</i> ★ Highly recommended where exposure via inhalation is possible, unless P404 has already been assigned</p> <p>P405 Store locked up.</p> <p>★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary</p>	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the</p>

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<p>mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust</p>	<p>exceptional cases where specific treatment, including the administration of an antidote, is urgently required</p>		<p>site of disposal while a reference to the applicable legislation is not necessary.</p>
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7.3.3.1 Acute Toxicity - Inhalation

Hazard category	Signal word	Hazard statement
3	Danger	H331 Toxic if inhaled

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust, unless P260 has already been assigned, <p>P271 Use only outdoors or in a well-ventilated area.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial/professional users 	<p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <ul style="list-style-type: none"> ★ Recommended <p>P311 Call a POISON CENTER or doctor/ physician.</p> <ul style="list-style-type: none"> ★ Recommended, in combination with P304+P340 <p>P321 Specific treatment (see ... on this label) ... Reference to supplemental first aid instruction. - <i>if immediate specific measures are required</i></p> <ul style="list-style-type: none"> ★ Highly recommended only in exceptional cases where specific treatment, including the administration of an antidote, is urgently required 	<p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed. - <i>if product is volatile so as to generate hazardous atmosphere.</i></p> <ul style="list-style-type: none"> ★ Highly recommended where exposure via inhalation is possible, unless P404 has already been assigned <p>P405 Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary 	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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7.3.3.1 Acute Toxicity - Inhalation

Hazard category	Signal word	Hazard statement
4	Warning	H332 Harmful if inhaled

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust, unless P260 has already been assigned <p>P271 Use only outdoors or in a well-ventilated area.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial/professional users 	<p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <ul style="list-style-type: none"> ★ Optional <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <ul style="list-style-type: none"> ★ Recommended, unless P310, P311 or P313 has already been assigned 		

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7.3.3.2 Skin Corrosion / Irritation

Hazard category	Signal word	Hazard statement
1A, 1B, 1C	Danger	H314 Causes severe skin burns and eye damage



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>Manufacturer/supplier to specify applicable conditions.</p> <p>- <i>specify do not breathe dusts or mists.</i></p> <p>- <i>If inhalable particles of dusts or mists may occur during use.</i></p> <p>★ Highly recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust</p> <p>P264 Wash ... thoroughly after handling.</p> <p>Manufacturer/supplier to specify parts of the body to be washed after handling.</p> <p>★ Highly recommended for the general public, unless P280 has already</p>	<p>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>★ Highly recommended for the general public, provided that medical advice indicates that the statement is appropriate</p> <p>★ Recommended for industrial / professional users</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.</p> <p>★ Highly recommended</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>★ Recommended for the general public</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p>	<p>P405 Store locked up.</p> <p>★ Highly recommended for the general public</p> <p>★ Optional for industrial / professional users unless other considerations deem it necessary</p>	<p>P501 Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>been assigned</p> <p>★ Highly recommended for industrial / professional users, unless P280 has already been assigned</p> <p>P280</p> <p>Wear protective gloves / protective clothing / eye protection / face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- <i>Specify protective gloves/clothing and eye/face protection.</i></p> <p>★ Highly recommended</p>	<p>P304 + P340</p> <p>If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>★ Optional</p> <p>P310</p> <p>Immediately call a POISON Center or doctor/physician.</p> <p>★ Highly recommended, in combination with P303+P361+P353, P305+P351+ P338 or P301 + P330 + P331</p> <p>P321</p> <p>Specific treatment (see ... on this label).</p> <p>Reference to supplemental first aid instruction.</p> <p>- <i>Manufacturer/supplier may specify a cleansing agent if appropriate</i></p> <p>★ Highly recommended only in exceptional cases where specific treatment, including the administration of an antidote, is urgently required</p> <p>P305 + P351 + P338</p> <p>IF IN EYES: Rinse cautiously with water for</p>		<p>legislation is not necessary.</p>

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Precautionary Statements			
Prevention	Response	Storage	Disposal
	several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. ★ Highly recommended		

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7.3.3.2 Skin Corrosion / Irritation

Hazard category	Signal word	Hazard statement
2	Warning	H315 Causes skin irritation

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P264</p> <p>Wash ... thoroughly after handling.</p> <p>... Manufacturer/supplier to specify parts of the body to be washed after handling.</p> <p>★ Optional</p> <p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>Manufacturer/supplier to specify type of equipment.</p> <p>- Specify protective gloves.</p> <p>★ Recommended</p>	<p>P302 + P352</p> <p>IF ON SKIN: Wash with plenty of soap and water.</p> <p>★ Optional for the general public</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p> <p>P321</p> <p>Specific treatment (see ... on this label).</p> <p>Reference to supplemental first aid instruction.</p> <p>- Manufacturer/supplier may specify a cleansing agent if appropriate</p> <p>★ Highly recommended only in exceptional cases where specific treatment, including the administration of an antidote, is urgently required</p> <p>P332 + P313</p> <p>If skin irritation occurs: Get medical advice / attention.</p> <p>★ Optional</p> <p>P362</p> <p>Take off contaminated clothing and wash before reuse.</p> <p>★ Optional</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p>		

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7.3.3.3 Eye Damage / Eye Irritation

Hazard category	Signal word	Hazard statement
1	Danger	H318 Causes serious eye damage

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>... Manufacturer/supplier to specify type of equipment.</p> <p>- <i>Specify eye/face protection.</i></p> <p>★ Highly recommended</p>	<p>P305 + P351 + P338</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>★ Highly recommended</p> <p>P310</p> <p>Immediately call a POISON Center or doctor/physician.</p> <p>★ Highly recommended, in combination with P305+P351+P338</p>		

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7.3.3.3 Eye Damage / Eye Irritation

Hazard category	Signal word	Hazard statement
2	Warning	H319 Causes serious eye irritation

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P280</p> <p>Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>... Manufacturer/supplier to specify type of equipment.</p> <p>- <i>Specify eye/face protection.</i></p> <p>★ Recommended</p>	<p>P305 + P351 + P338</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>★ Recommended for the general public</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p>		
<p>P264</p> <p>Wash ... thoroughly after handling.</p> <p>... Manufacturer / supplier to specify parts of the body to be washed after handling.</p> <p>★ Optional</p>	<p>P337 + P313</p> <p>If eye irritation persists: Get medical advice/attention.</p> <p>★ Recommended</p>		

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7.3.3.4 Sensitisation - Respiratory

Hazard category ¹⁵	Signal word	Hazard statement
1, 1A, 1B	Danger	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P261 Avoid breathing dust/fume/gas/mist/ vapours/spray. Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Highly recommended, unless P260 has already been assigned, where the substance / mixture is highly volatile or a gas or where there is a realistic risk of inhalation, e.g. through spraying or inhalable dust <p>P285 In case of inadequate ventilation wear respiratory protection. Manufacturer/supplier to specify equipment.</p> <ul style="list-style-type: none"> ★ Highly recommended, unless P284 has already been assigned, where the substance / mixture is highly volatile or a gas or where there is a realistic risk of inhalation, e.g. through spraying or inhalable dust 	<p>P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <ul style="list-style-type: none"> ★ Highly recommended, unless P304+P340 has already been assigned <p>P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.</p> <ul style="list-style-type: none"> ★ Highly recommended, in combination with P304+P341 		<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

¹⁵ Following the entry into force of the 2nd ATP to the CLP Regulation, it is foreseen that the classification into categories 1A and 1B becomes legally binding on 1 December 2012 for substances and on 1 June 2015 for mixtures.

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7.3.3.4 Sensitisation - Skin

Hazard category ¹⁶	Signal word	Hazard statement
1, 1A, 1B	Warning	H317 May cause an allergic skin reaction

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P261</p> <p>Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust, unless P260 has already been assigned <p>P272</p> <p>Contaminated work clothing should not be allowed out of the workplace.</p> <ul style="list-style-type: none"> ★ Not intended to be used for the general public ★ Optional for industrial/professional users 	<p>P302 + P352</p> <p>IF ON SKIN: Wash with plenty of soap and water.</p> <ul style="list-style-type: none"> ★ Recommended for the general public ★ Recommended for inclusion in the Safety Data Sheet <p>P333 + P313</p> <p>If skin irritation or rash occurs: Get medical advice/attention.</p> <ul style="list-style-type: none"> ★ Recommended <p>P321</p> <p>Specific treatment (see ... on this label)</p> <p>... Reference to supplemental first aid instruction.</p> <p>- <i>Manufacturer/supplier may specify a</i></p>		<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of

¹⁶ The classification into categories 1A and 1B becomes legally binding on 1 December 2012 for substances and on 1 June 2015 for mixtures.

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<p>P280 Wear protective gloves / protective clothing / eye protection / face protection. ... Manufacturer/supplier to specify type of equipment. - <i>Specify protective gloves.</i> ★ Highly recommended</p>	<p><i>cleansing agent if appropriate.</i> ★ Highly recommended only in exceptional cases where specific treatment, including the administration of an antidote, is urgently required</p> <p>P363 Wash contaminated clothing before reuse. ★ Recommended</p>		<p>disposal while a reference to the applicable legislation is not necessary.</p>
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7.3.3.5 Germ Cell Mutagenicity

Hazard category	Signal word	Hazard statement
1A and 1B	Danger	H340 May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
2	Warning	H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P201</p> <p>Obtain special instructions before use.</p> <ul style="list-style-type: none"> ★ Highly recommended for category 1A and 1B ★ Recommended for category 2 <p>P202</p> <p>Do not handle until all safety precautions have been read and understood.</p> <ul style="list-style-type: none"> ★ Optional where P201 has already been assigned 	<p>P308 + P313</p> <p>IF exposed or concerned: Get medical advice / attention.</p> <ul style="list-style-type: none"> ★ Highly recommended for category 1A and 1B ★ Recommended for category 2 	<p>P405</p> <p>Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public¹⁷ ★ Optional for industrial/professional users unless other considerations deem it necessary 	<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial /

¹⁷ Substances and mixtures which are listed in Appendix 1-6 of Annex XVII to Regulation (EC) No 1907/2006 (REACH) and which are assigned H340, H350 or H360 are restricted to industrial / professional users and normally not supplied to the general public (see entry 28, 29 and 30 in Annex XVII to REACH as amended by Commission Regulation (EC) No 552/2009).

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<p>P281</p> <p>Use personal protective equipment as required.</p> <p>★ Highly recommended to cover certain exposure risks or routes of exposure although P280, P282, P283, P284 or P285 may have been assigned as well</p>			<p>professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>
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7.3.3.6 Carcinogenicity

Hazard category	Signal word	Hazard statement
1A and 1B	Danger	H350 May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
2	Warning	H351 Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P201</p> <p>Obtain special instructions before use.</p> <ul style="list-style-type: none"> ★ Highly recommended for category 1A and 1B ★ Recommended for category 2 <p>P202</p> <p>Do not handle until all safety precautions have been read and understood.</p> <ul style="list-style-type: none"> ★ Optional where P201 has already been assigned 	<p>P308 + P313</p> <p>IF exposed or concerned: Get medical advice/attention.</p> <ul style="list-style-type: none"> ★ Highly recommended for category 1A and 1B ★ Recommended for category 2 	<p>P405</p> <p>Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public¹⁸ ★ Optional for industrial/professional users unless other considerations deem it necessary 	<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

¹⁸ Substances and mixtures which are listed in Appendix 1-6 of Annex XVII to Regulation (EC) No 1907/2006 (REACH) and which are assigned H340, H350 or H360 are restricted to industrial / professional users and normally not supplied to the general public (see entry 28, 29 and 30 in Annex XVII to REACH as amended by Commission Regulation (EC) No 552/2009).

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<p>P281</p> <p>Use personal protective equipment as required.</p> <p>★ Highly recommended to cover certain exposure risks or routes of exposure although P280, P282, P283, P284 or P285 may have been assigned as well</p>			<p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>
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7.3.3.7 Reproductive Toxicity

Hazard category	Signal word	Hazard statement
1A and 1B	Danger	H360 May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
2	Warning	H361 Suspected of damaging fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P201</p> <p>Obtain special instructions before use.</p> <ul style="list-style-type: none"> ★ Highly recommended for category 1A and 1B ★ Recommended for category 2 <p>P202</p> <p>Do not handle until all safety precautions have been read and understood.</p> <ul style="list-style-type: none"> ★ Optional where P201 has already been 	<p>P308 + P313</p> <p>IF exposed or concerned: Get medical advice/attention.</p> <ul style="list-style-type: none"> ★ Highly recommended for category 1A and 1B ★ Recommended for category 2 	<p>P405</p> <p>Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public¹⁹ ★ Optional for industrial / professional users unless other considerations deem it necessary 	<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not

¹⁹ Substances and mixtures which are listed in Appendix 1-6 of Annex XVII to Regulation (EC) No 1907/2006 (REACH) and which are assigned H340, H350 or H360 are restricted to industrial / professional users and normally not supplied to the general public (see entry 28, 29 and 30 in Annex XVII to REACH as amended by Commission Regulation (EC) No 552/2009).

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<p>assigned</p> <p>P281</p> <p>Use personal protective equipment as required.</p> <p>★ Highly recommended to cover certain exposure risks or routes of exposure although P280, P282, P283, P284 or P285 may have been assigned as well</p>			<p>necessary.</p> <p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>
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7.3.3.7 Reproductive Toxicity

Hazard category

Hazard category for lactation effects

Signal word

No signal word

Hazard statement

H362 May cause harm to breast-fed children

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P201</p> <p>Obtain special instructions before use.</p> <p>★ Highly recommended</p> <p>P260</p> <p>Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> - <i>specify do not breathe dusts or mists.</i> - <i>If inhalable particles of dusts or mists may occur during use.</i> <p>★ Highly recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust</p> <p>P263</p> <p>Avoid contact during pregnancy/while nursing.</p>	<p>P308 + P313</p> <p>IF exposed or concerned: Get medical advice/attention.</p> <p>★ Recommended</p>		

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Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>★ Highly recommended</p> <p>P264</p> <p>Wash ... thoroughly after handling.</p> <p>... Manufacturer / supplier to specify parts of the body to be washed after handling.</p> <p>★ Optional</p> <p>P270</p> <p>Do not eat, drink or smoke when using this product.</p> <p>★ Recommended for the general public</p> <p>★ Optional for industrial / professional users</p> <p>★ Recommended for inclusion in the Safety Data Sheet</p>			

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7.3.3.8 Specific Target Organ Toxicity (Single Exposure)

Hazard category	Signal word	Hazard statement
1	Danger	H370 Causes damage to organs (or state all organs affected if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Highly recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust <p>P264 Wash ... thoroughly after handling.</p> <p>... Manufacturer / supplier to specify parts of the body to be washed after handling.</p> <ul style="list-style-type: none"> ★ Optional <p>P270 Do not eat, drink or smoke when using this product.</p>	<p>P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.</p> <ul style="list-style-type: none"> ★ Highly recommended <p>P321 Specific treatment (see ... on this label)</p> <p>... Reference to supplemental first aid instruction.</p> <p>- if immediate measures are required.</p> <ul style="list-style-type: none"> ★ Highly recommended only in exceptional cases where specific treatment, including the administration of an antidote, is urgently required 	<p>P405 Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary 	<p>P501 Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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<ul style="list-style-type: none">★ Recommended for the general public★ Optional for industrial / professional users★ Recommended for inclusion in the Safety Data Sheet			
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7.3.3.8 Specific Target Organ Toxicity (Single Exposure)

Hazard category	Signal word	Hazard statement
2	Warning	H371 May cause damage to organs (or state all organs affected if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P260 Do not breathe dust/fume/gas/mist/vapours/spray. Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Highly recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust <p>P264 Wash ... thoroughly after handling. ... Manufacturer / supplier to specify parts of the body to be washed after handling.</p> <ul style="list-style-type: none"> ★ Optional <p>P270 Do not eat, drink or smoke when using this product.</p>	<p>P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.</p> <ul style="list-style-type: none"> ★ Recommended 	<p>P405 Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary 	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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<ul style="list-style-type: none">★ Recommended for the general public★ Optional for industrial / professional users★ Recommended for inclusion in the Safety Data Sheet			
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7.3.3.8 Specific Target Organ Toxicity (Single Exposure)

Hazard category	Signal word	Hazard statement
3		Warning
		H335 May cause respiratory irritation; or H336 May cause drowsiness or dizziness



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust, unless P260 has already been assigned, <p>P271 Use only outdoors or in a well-ventilated area.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial / professional users 	<p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <ul style="list-style-type: none"> ★ Optional <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <ul style="list-style-type: none"> ★ Recommended unless P310, P311 or P313 has already been assigned 	<p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed. <i>- if product is volatile so as to generate hazardous atmosphere.</i></p> <ul style="list-style-type: none"> ★ Recommended where exposure via inhalation is possible, unless P404 is already assigned <p>P405 Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary 	<p>P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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7.3.3.9 Specific Target Organ Toxicity (Repeated Exposure)

Hazard category	Signal word	Hazard statement
1	Danger	H372 Causes damage to organs (state all organs affected if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>Manufacturer/supplier to specify applicable conditions.</p> <ul style="list-style-type: none"> ★ Highly recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust <p>P264 Wash ... thoroughly after handling.</p> <p>... Manufacturer / supplier to specify parts of the body to be washed after handling.</p> <ul style="list-style-type: none"> ★ Optional <p>P270 Do not eat, drink or smoke when using this product.</p>	<p>P314 Get medical advice/attention if you feel unwell.</p> <ul style="list-style-type: none"> ★ Recommended unless P310, P311, P312 or P313 has already been assigned 		<p>P501 Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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<ul style="list-style-type: none">★ Recommended for the general public★ Optional for industrial / professional users★ Recommended for inclusion in the Safety Data Sheet			
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7.3.3.9 Specific Target Organ Toxicity (Repeated Exposure)

Hazard category	Signal word	Hazard statement
2	Warning	H373 May cause damage to organs (state all organs affected if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P260</p> <p>Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>Manufacturer/supplier to specify applicable conditions.</p> <p>★ Highly recommended where the substance / mixture is highly volatile or a gas or where exposure via inhalation is possible, e.g. through spraying or inhalable dust</p>	<p>P314</p> <p>Get medical advice/attention if you feel unwell.</p> <p>★ Recommended unless P310, P311, P312 or P313 has already been assigned</p>		<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>

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7.3.3.10 Aspiration Hazard

Hazard category	Signal word	Hazard statement
1	Danger	H304 May be fatal if swallowed and enters airways

Precautionary Statements			
Prevention	Response	Storage	Disposal
	<p>P301 + P310</p> <p>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <ul style="list-style-type: none"> ★ Highly recommended, in combination with P331 <p>P331</p> <p>Do NOT induce vomiting.</p> <ul style="list-style-type: none"> ★ Highly recommended, in combination with P301 +P310 	<p>P405</p> <p>Store locked up.</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public ★ Optional for industrial / professional users unless other considerations deem it necessary 	<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <ul style="list-style-type: none"> ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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7.3.4 Specific Precautionary Statements for Environmental Hazards

7.3.4.1 Hazardous to the Aquatic Environment – Acute Hazard



Hazard category	Signal word	Hazard statement
1	Warning	H400 Very toxic to aquatic life

Precautionary Statements			
Prevention	Response	Storage	Disposal
P273 Avoid release to the environment. - <i>if this is not the intended use.</i> ★ Recommended, unless this is the intended use	P391 Collect spillage. ★ Recommended		P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). ★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary. ★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.

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7.3.4.1 Hazardous to the Aquatic Environment – Chronic Hazard

Hazard category	Signal word	Hazard statement
1	Warning	H410 Very toxic to aquatic life with long lasting effects
2	No signal word	H411 Toxic to aquatic life with long lasting effects



Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P273</p> <p>Avoid release to the environment.</p> <p>- <i>if this is not the intended use.</i></p> <p>★ Recommended, unless this is the intended use</p>	<p>P391</p> <p>Collect spillage.</p> <p>★ Recommended</p>		<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>

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7.3.4.1 Hazardous to the Aquatic Environment – Chronic Hazard

Hazard category	Signal word	Hazard statement
3	No signal word	H412 Harmful to aquatic life with long lasting effects
4	No signal word	H413 May cause long lasting harmful effects to aquatic life

Precautionary Statements			
Prevention	Response	Storage	Disposal
<p>P273</p> <p>Avoid release to the environment.</p> <p>- <i>if this is not the intended use.</i></p> <p>★ Recommended unless this is the intended use</p>			<p>P501</p> <p>Dispose of contents/container to ...</p> <p>... in accordance with local/regional/national/international regulations (to be specified).</p> <p>★ Highly recommended for the general public if the substance / mixture is subject to legislation on hazardous waste. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p> <p>★ Recommended for industrial / professional users if there are specific disposal requirements above the normal expectation for the disposal of chemicals. It is recommended to specify the site of disposal while a reference to the applicable legislation is not necessary.</p>

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7.3.5 Additional Hazards

7.3.5.1 Hazardous to the ozone layer (see the explanations provided in section 4.8 of this document)

Hazard category	Signal word	Hazard statement
1	Warning	H420 Harms public health and the environment by destroying ozone in the upper atmosphere



Precautionary Statements			
Prevention	Response	Storage	Disposal
			P502 Dispose of contents/container to ... Refer to manufacturer/supplier for information on recovery / recycling ★ Highly recommended

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7.4. Examples for the selection of precautionary statements for the label

The selection of precautionary statements along the lines of the proposed guidance above is illustrated below with various model substances. The set of precautionary statements to be prioritized for the label is highlighted in **bold underlined (highly recommended)** and underlined (recommended), while the optional statements appear in normal letters (no highlighting) and the statements **not to be used** are put in grey colour.

Please note that even if a substance or mixture has the same hazards as one of the following examples, another set of precautionary statements might be appropriate based on the specific conditions for use given in the tables above.

1. Example of a substance (imaginary) assigned a physical and various health hazard classifications

A. Classification and hazard statements:

Flam. Liq. 2	H225 (Highly flammable liquid and vapour)
Acute Tox. 3 (oral)	H301 (Toxic if swallowed)
Acute Tox. 3 (dermal)	H311 (Toxic in contact with skin)
Acute Tox. 3 (inhalation)	H331 (Toxic if inhaled)
STOT-SE 1	H370 (Causes damage to organs)

B. Further information:

This substance is presumed to be volatile, but not so as to generate a potentially explosive atmosphere. There is possible exposure via inhalation. Specific extinction media are not necessary. Specific treatment/measures is/are not urgently required. There are no specific disposal requirements. The substance is not intended to be used by the general public, but rather only by industrial/professional users.

C. Precautionary statements on the basis of the classification (see Annex IV to CLP) and according to the guidance:

Acute Tox. 3 (Oral)	Acute Tox. 3 (Dermal)	Acute Tox. 3 (Inhalation)	STOT-SE 1	Flam. Liq. 2
P264 P270	<u>P280</u>	P261 P271	<u>P260</u> P264 P270	<u>P210</u> <u>P233</u> P240 P241 P242 P243

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				P280
<u>P301 + P310</u> P321 P330	P312 P322 P361 P363 P302 + P352	<u>P304 + P340</u> P311 P321	<u>P307 + P311</u> P321	P303 + P361 + P353 P370 + P378
P405	P405	<u>P403 + P233</u> P405	P405	P403 + P235
P501	P501	P501	P501	P501

P261 = highly recommended **P261** = recommended P261 = optional **P261** = not to be used/unless condition applies/inclusion on Safety Data Sheet only

D. Selection of highly recommended and recommended precautionary statements:

Where the same statement is assigned to different hazards, but with different priority, the most conservative approach is taken. Where appropriate, precautionary statements are combined into a single combination statement. Duplication of individual phrases is avoided. This results in the following in the case of this substance:

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/ face protection.

P301+P310 IF SWALLOWED: Immediately call a POISON Center or doctor/physician.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

E. Result:

A substantial reduction is achieved: selection in line with the guidance results in seven precautionary statements. This compares with a starting set of 28 different potentially applicable statements for the CLP hazard label, assignable on the basis of the underlying hazards.

The selected precautionary statements shall be placed on the CLP hazard label. As a Safety Sheet needs to be prepared, they would also have to be included in the Safety Data Sheet, under heading 2.2 (“Labelling elements”), see the (draft) guidance on the compilation of Safety Data Sheets. The de-selected statements can be introduced under the relevant headings of the

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Safety Data Sheet as well, to provide the industrial or professional user with sufficient information to handle the substance safely.

2. Example of a substance (sodium peroxide Na₂O₂, EC No 215-209-4) assigned a severe physical and health hazard classification

A. Classification and hazard statements:

Ox. Sol. 1 H271 (May cause fire or explosion; strong oxidiser)

Skin Corr. 1A H314 (Causes severe skin burns and eye damage)

B. Further information:

This substance is presumed to be non-volatile. There is therefore no exposure via inhalation. Specific extinction media are not necessary. Specific treatment/measures is/are not urgently required. There are no specific disposal requirements. The substance is not intended to be used by the general public, but rather only by industrial/professional users.

C. Precautionary statements on the basis of the classification (see Annex IV to CLP) and according to the guidance:

Ox. Sol. 1	Skin Corr. 1A
<p><u>P210</u> P220 <u>P221</u> <u>P280</u> P283</p>	<p>P260 P264 <u>P280</u></p>
<p><u>P306+P360</u> <u>P371+P380+P375</u> P370+P378</p>	<p><u>P301+P330+P331</u> <u>P303+P361+P353</u> P363 P304+P340 <u>P310</u> P321 <u>P305+P351+P338</u></p>
-	P405
P501	P501

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P261 = highly recommended **P261** = recommended P261 = optional **P261** = not to be used/unless condition applies/inclusion on Safety Data Sheet only

D. Selection of highly recommended and recommended precautionary statements:

Where the same statement is assigned to different hazards, but with different priority, the most conservative approach is taken. Where appropriate, precautionary statements are combined into a single combination statement. Duplication of individual phrases is avoided. This results in the following in the case of this substance:

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P221 Take any precaution to avoid mixing with combustibles.

P280 Wear protective gloves/protective clothing/eye protection/ face protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353+310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

E. Result:

A substantial reduction is achieved: selection in line with the guidance results in seven, mostly combined, precautionary statements. This compares with a starting set of 19 different potentially applicable statements for the CLP hazard label, assignable on the basis of the underlying hazards.

The selected precautionary statements shall be placed on the CLP hazard label. As a Safety Data Sheet needs to be prepared, they would also have to be included in the Safety Data Sheet, under heading 2.2 (“Labelling elements”), see the (draft) guidance on the compilation of Safety Data Sheets. The de-selected statements can be introduced under the relevant headings of the Safety Data Sheet as well, to provide the industrial or professional user with sufficient information to handle the substance safely.

3. Example of a substance (dimethylzinc, EC No 208-884-1) assigned physical, health and environmental classifications

A. Classification and hazard statements:

Pyr. Liq. 1	H250
Water-react. 1	H260
Skin Corr. 1B	H314

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Aquatic Acute 1 (H400; is redundant because of H410)

Aquatic Chronic 1 H410

B. Further information:

This substance is presumed to be non-volatile. There is therefore no exposure via inhalation. Specific extinction media are necessary, because water will increase the risk when used for the extinction of fire. Specific disposal requirements are in place. The substance is not intended to be used by the general public, but rather only by industrial/professional users.

C. Precautionary statements on the basis of the classification (see Annex IV to CLP) and according to the guidance:

Pyr. Liq.1	Water-react. 1	Skin Corr. 1B	Aquatic Acute 1	Aquatic Chronic 1
<u>P210</u> P222 <u>P280</u> P231(add)	P223 <u>P231+P232</u> <u>P280</u>	<u>P260</u> <u>P264</u> <u>P280</u>	<u>P273</u>	<u>P273</u>
<u>P302+P334</u> <u>P370+P378</u>	<u>P335+P334</u> <u>P370+P378</u>	<u>P301+P330+P331</u> <u>P303+P361+P353</u> <u>P363</u> <u>P304+P340</u> <u>P310</u> <u>P321</u> <u>P305+P351+P338</u>	<u>P391</u>	<u>P391</u>
<u>P422</u>	<u>P402+P404</u>	P405	-	-
-	<u>P501</u>	<u>P501</u>	<u>P501</u>	<u>P501</u>

P261 = highly recommended P261 = recommended P261 = optional **P261** = not to be used/unless condition applies/inclusion on Safety Data Sheet only

D. Selection of highly recommended and recommended precautionary statements:

Where the same statement is assigned to different hazards, but with different priority, the most conservative approach is taken. Where appropriate, precautionary statements are combined into a single combination statement. Duplication of individual phrases is avoided.

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P303+ P361+P353 (IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.) and P302+P335+P334+P310 (IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.²⁰ Immediately call a POISON CENTER or doctor/physician.) were merged into one single combination phrase P303+ P335+P334+P310+P361 where duplication of the message was avoided.

This results in the following in the case of this substance:

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/ face protection.

P391 Collect spillage.

P501 Dispose of contents/container to ...

P231+P232 Handle under inert gas. Protect from moisture.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+ P335+P334+P310+P361 IF ON SKIN (or hair): Brush off loose particles from skin. Immerse in cool water.²¹ Immediately call a POISON CENTER or doctor/physician Remove / Take off immediately all contaminated clothing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378 In case of fire: Use ... for extinction.

E. Result:

A substantial reduction is achieved: selection in line with the guidance results in 10, partly combined, precautionary statements. This compares with a starting set of 23 different potentially applicable statements for the CLP hazard label, assignable on the basis of the underlying hazards.

However, a set of 10 mostly long precautionary statements exceeds the target number of six and also the amount of digestible information. It may be worthwhile to consider whether at least the statements P391 and P501 should be put in the Safety Data Sheet instead of on the label as the prevention and response statements for the physical and health hazards appear to contain the more urgent advice for the label. This would further reduce the number of statements on the label to eight.

The selected precautionary statements shall be placed on the CLP hazard label. As a Safety Data Sheet needs to be prepared, they would also have to be included in the Safety Data Sheet, under heading 2.2 (“Labelling elements”), see the (draft) guidance on the compilation of Safety Data Sheets. The de-selected statements can be introduced under the relevant headings

²⁰ The sub-phrase of P334 “/wrap in wet bandages” is not to be used for water-reactive substances and mixtures category 1, see Table 7.2.12.

²¹ The sub-phrase of P334 “/wrap in wet bandages” is not to be used for water-reactive substances and mixtures category 1, see Table 7.2.12.

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of the Safety Data Sheet as well, to provide the industrial or professional user with sufficient information to handle the substance safely.

4. Example of a mixture (imaginary) for consumer use

A. Classification and hazard statements:

Flam. Liq. 2	H225 (Highly flammable liquid and vapour)
Acute Tox. 4 (oral)	H302 (Harmful if swallowed)
Skin irrit. 2	H315 (Causes skin irritation)

B. Further information:

This mixture is presumed to be volatile, but not so as to generate a potentially explosive atmosphere. Specific extinction media are not necessary. Specific treatment is not urgently required. There are no specific disposal requirements. The mixture is intended to be used by the general public.

C. Precautionary statements on the basis of the classification (see Annex IV to CLP) and according to the guidance:

Flam. Liq. 2	Acute Tox. 4 (Oral)	Skin Irrit. 2
<u>P102, P102</u>		
<u>P210</u> <u>P233</u> P240 P241 P242 P243 P280	<u>P264</u> <u>P270</u>	P264 <u>P280</u>
P303 + P361 + P353 P370 + P378	P301+P312 P330	P302+P352 P321 P332+P313 P362
P403 + P235	-	-
P501	P501	-

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P261 = highly recommended **P261** = recommended P261 = optional **P261** = not to be used/unless condition applies/inclusion on Safety Data Sheet only

D. Selection of highly recommended and recommended precautionary statements:

Where the same statement is assigned to different hazards, but with different priority, the most conservative approach is taken. Where appropriate, precautionary statements are combined into a single combination statement. Duplication of individual phrases is avoided. This results in the following in the case of this substance:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P233 Keep container tightly closed.

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves.

E. Result:

A substantial reduction is achieved: selection in line with the guidance results in seven precautionary statements. This compares with a starting set of 19 different potentially applicable statements for the CLP hazard label, assignable on the basis of the underlying hazards.

Attachment: Glossary

Terms used in this guidance document

ADR means the European Agreement concerning the International Carriage of Dangerous Goods by Road, concluded in Geneva on 30 September 1957, that has been implemented within the EU through Directive 2008/68/EC;

Acute toxicity means those adverse effects occurring following oral or dermal administration of a single dose of a substance or mixture, or multiple doses given within 24 hours, or an inhalation exposure of 4 hours.

Aerosols means aerosol dispensers, any non-refillable receptacles made of metal, glass or plastics and containing a gas compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state;

Alloy means a metallic material, homogeneous on a macroscopic scale, consisting of two or more elements so combined that they cannot be readily separated by mechanical means; alloys are considered to be mixtures for the purposes of CLP;

Article, as defined in Article 2(9) of the CLP Regulation, means an object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition;

Aspiration means the entry of a liquid or solid substance or mixture directly through the oral or nasal cavity, or indirectly from vomiting, into the trachea and lower respiratory system;

Carcinogen means a substance or a mixture of substances which induces cancer or increases its incidence

CLP or **CLP Regulation** means Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures;

CMR means a substance or mixture which is carcinogenic, mutagenic or toxic to reproduction

Corrosive to metals means materially damaging, or even destroying, metals by chemical action of a substance or a mixture;

CRC means child-resistant closure;

CRF means child-resistant fastening;

Distributor means any natural or legal person established within the Community, including a retailer, who only stores and places on the market a substance, on its own or in a mixture, for third parties;

Downstream user means any natural or legal person established within the Community, other than the **manufacturer** or the **importer**, who uses a substance, either on its own or in a mixture, in the course of his industrial or professional activities. A **distributor** or a **consumer** is not a **downstream user**. A **re-importer**, exempted pursuant to Article 2(7)(c) REACH Regulation, shall be regarded as a **downstream user**;

DPD means the Dangerous Preparations Directive (1999/45/EC);

DSD means the Dangerous Substances Directive (67/548/EEC);

Explosive article means an article containing one or more explosive substances;

Explosive substance means a solid or liquid substance (or mixture of substances) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed

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as to cause damage to the surroundings. Pyrotechnic substances are included even when they do not evolve gases;

Eye irritation means the production of changes in the eye following the application of test substance to the anterior surface of the eye, which are fully reversible within 21 days of application;

Flammable gas means a gas having a flammable range with air at 20 °C and a standard pressure of 101.3 kPa;

Flammable liquid means a liquid having a flash point of not more than 60°C. **Flash point** means the lowest temperature (corrected to a standard pressure of 101.3 kPa) at which the application of an ignition source causes the vapours of a liquid to ignite under specified test conditions;

Flammable solid means a solid which is readily combustible, or may cause or contribute to fire through friction;

GHS means the “Globally Harmonised System of Classification and Labelling of Chemicals” developed within the United Nations (UN) structure;

Hazard category means the division of criteria within each hazard class, specifying hazard severity;

Hazard class means the nature of the physical, health or environmental hazard;

Hazard pictogram (sometimes also referred to as “pictogram” in this document) means a graphical composition that includes a symbol plus other graphic elements, such as a border, background pattern or colour that is intended to convey specific information about the hazard concerned;

Hazard statement means a phrase assigned to a hazard class and category that describes the nature of the hazards of a hazardous substance or mixture, including, where appropriate, the degree of hazard;

Hazardous means fulfilling the criteria relating to physical hazards, health hazards or environmental hazards, laid down in parts 2 to 5 of Annex I of CLP;

IMDG Code means the “International Maritime Dangerous Goods Code” for the transport of dangerous goods by sea;

Import means the physical introduction into the customs territory of the Community;

Importer means any natural or legal person established within the Community who is responsible for import;

INCI means International Nomenclature of Cosmetic Ingredients;

Intermediate packaging means packaging placed between inner packaging, or articles, and outer packaging;

IUCLID means the International Uniform Chemical Information Database;

Label means an appropriate group of written, printed or graphic information elements concerning a hazardous substances or mixture, selected as relevant to the target sector (s), that is affixed to, printed on, or attached to the immediate container of a hazardous substance or mixture, or to the outside packaging of a hazardous substances or mixture (definition follows Chapter 1.2 of the UN GHS);

Label element means one type of information that has been harmonised for use in a label, e.g. hazard pictogram, signal word;

M-factor means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present;

Manufacturer means any natural or legal person established within the Community who manufactures a substance within the Community;

Manufacturing means production or extraction of substances in the natural state;

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Mixture means a mixture or solution composed of two or more substances (Note: “Mixture” (CLP) and “preparation” (REACH) are synonymous). However, UN GHS Chapter 1.2 includes the phrase, “in which they do not react” at the end of an otherwise identical definition;

Mutagen means an agent giving rise to an increased occurrence of mutations in populations of cells and /or organisms;

Organic peroxide means a liquid or solid organic substance which contains the bivalent -O-O-structure and may be considered a derivative of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals. The term also includes organic peroxide formulations (mixtures);

Oxidising gas means any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does;

Oxidising liquid means a liquid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material;

Oxidising solid means a solid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material;

Package means the complete product of the packing operation, consisting of the packaging and its contents;

Packaging means one or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions;

Pictogram see hazard pictogram

Placing on the market means supplying or making available, whether in return for payment or free of charge, to a third party. Import shall be deemed to be placing on the market.

Precautionary statement means a phrase that describes recommended measure(s) to minimise or prevent adverse effects resulting from exposure to a hazardous substance or mixture due to its use or disposal;

Product identifier means details permitting the identification of the substance or mixture;

Pyrophoric liquid means a liquid which, even in small quantities, is liable of igniting within five minutes after coming into contact with air;

Pyrophoric solid means a solid which, even in small quantities, is liable of igniting within five minutes after coming into contact with air;

Pyrotechnic article means an article containing one or more pyrotechnic substances;

Pyrotechnic substance means a substance or mixture of substances designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions;

REACH and REACH Regulation means Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;

Registrant means the **manufacturer** or the **importer** of a substance or the **producer or importer of an article** submitting a registration for a substance under the REACH Regulation;

Reproductive Toxicity includes adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring and effects on or via lactation;

Respiratory sensitiser means a substance that will lead to hypersensitivity of the airways following inhalation of the substance;

SADT means Self-Accelerating Decomposition Temperature;

SDS means “Safety Data Sheet”;

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Self-heating substance means a solid or liquid substance, other than a pyrophoric substance, which, by reaction with air and without energy supply, is liable to self-heat; this substance differs from a pyrophoric substance in that it will ignite only when in large amounts (kilograms) and after long periods of time (hours or days);

Self-reactive substance means a thermally unstable liquid or solid substance liable to undergo a strongly exothermic decomposition even without participation of oxygen (air). This definition excludes substances or mixtures classified under CLP as explosive, organic peroxides or as oxidising;

Serious eye damage means the production of tissue damage in the eye, or serious physical decay of vision, following application of a test substance to the anterior surface of the eye, which is not fully reversible within 21 days of application;

Signal word means a word that indicates the relative level of severity of hazards to alert the potential reader of the hazard; the following two levels are distinguished:

(a) Danger means a signal word indicating the more severe hazard categories; and

(b) Warning means a signal word indicating the less severe hazard categories;

Skin corrosion means the production of irreversible damage to the skin, namely visible necrosis through the epidermis and into the dermis, following the application of a test substance up to 4 hours;

Skin irritation means the production of reversible damage to the skin following the application of a test substance for up to 4 hours;

Skin sensitiser means a substance that will lead to an allergic response following skin contact.

Specific target organ toxicity means specific target organ toxicity, cf. STOT, STOT-SE and STOT-RE;

STOT means specific target organ toxicity;

STOT-RE means specific target organ toxicity arising from a repeated exposure to a substance or mixture;

STOT-SE means specific target organ toxicity arising from a single exposure to a substance or mixture;

Substance means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any identified impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition;

Symbol means a graphical element intended to succinctly convey information;

Trade name means a designation under which a substance or mixture is placed on the market

TWD means tactile warnings of danger;

UN GHS means the international criteria agreed by the United Nation Economic and Social Council (UN ECOSOC) for the classification and labelling of hazardous substances and mixtures, called the “Globally Harmonised System of Classification and Labelling of Chemicals”;

UN RTDG means the United Nations Recommendations on the Transport of Dangerous Goods; and

Use means any processing, formulation, consumption, storage, keeping, treatment, filling into containers, transfer from one container to another, mixing, production of an article or any other utilisation.

Organisations

Agency means the “European Chemicals Agency,” also known as the ECHA, established under the REACH Regulation;

CAS means “Chemical Abstract Service”;

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Competent Authority (CA) means the authority or authorities or bodies established by the member States to carry out the obligations arising from the CLP Regulation;

ECHA means the “European Chemicals Agency,” also known as “the Agency,” established under the REACH Regulation;

EU means the “European Union”;

IUPAC means the “International Union of Pure and Applied Chemistry”;

UN means the “United Nations”.

European Chemicals Agency

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