



Secretariat

Distr.  
GENERAL

ST/SG/AC.10/C.4/2004/8  
30 April 2004

Original: ENGLISH

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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF  
DANGEROUS GOODS AND ON THE GLOBALLY  
HARMONIZED SYSTEM OF CLASSIFICATION  
AND LABELLING OF CHEMICALS**

Sub-Committee of Experts on the Globally Harmonized System  
of Classification and Labelling of Chemicals

Seventh session, 14-16 July 2004  
Item 3 (a) of the provisional agenda

DEVELOPMENT OF GUIDANCE FOR IMPLEMENTATION

Precautionary Statements (PS)

Transmitted by the expert from Germany

**INTRODUCTION**

1. At its Fourth session in December 2002, the Sub-Committee decided to set up a Correspondence Group on Precautionary Statements (ST/SG/AC.10/C.4/8, para. 27), the objective of which would be to derive standardized advice on how to avoid hazards indicated by GHS hazard statements or to respond to incidents.

**ATTENDANCE**

2. Experts from Australia, Austria, Belgium, Canada, Denmark, Germany, Italy, Japan, the Netherlands, the United States of America; the International Programme on Chemical Safety (WHO/ILO/UNEP) and the Commission of the European Communities (CEC) have been participating in the correspondence group.

3. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: European Chemical Industry Council (CEFIC), Dangerous Goods Advisory Council (DGAC), International Association of the Soap, Detergent and Maintenance Products Industry (AISE), American Chemistry Council (ACC), International Council of Chemical Associations (ICCA), International Organization for Standardization (ISO), Soap and Detergent Association (SDA).

## **PROCEDURE**

4. Beyond the exchange of views by e-mail, the Correspondence Group gratefully accepted the opportunity as offered by the Sub-Committee secretariat to meet before the plenary session of the Sub-Committee 5th session to discuss the structure of the guidance document. The results of this meeting are reflected in UN/SCEGHS/5/INF.22.

## **STARTING POINT**

5. Whereas several existing systems with sets of phrases are documented, the IPCS International Chemical Safety Card (ICSC) Compilers Guide, the American National Standards (ANSI Z129.1), and the EU labelling system (S-phrases) have been used as the major information sources for the selection of precautionary statements covering most of those used by other systems.

## **REPORTING**

6. The current status of discussion within the Correspondence Group have been reported to the Sub-Committee at its fifth (UN/SCEGHS/5/INF.5) and sixth session (UN/SCEGHS/6/INF.2 and INF.9). The Sub-Committee took notice of the progress and the interim decisions on the lines of further development of the guidance as proposed by the group (ST/SG/AC.10/C.4/10, paras. 13, 14, 17, Annex 3 and ST/SG/AC.10/C.4/12, paras. 34 to 37, Annex 3). In particular, it has been decided that the text for precautionary statements would be a revision of current Annex 3 of the GHS.

## **SCOPE OF WORK**

7. Precautionary statements have been linked with the hazard classes and categories of the GHS. Harmonization of precautionary statements does not mean standardization of precautionary information, flexibility is allowed for the language and combination of words used by the manufacturer/user.

8. A harmonized set of common precautionary statements on the GHS label will form the basis of a mutual recognition of labelling between countries in order to allow the hazard communication elements of the existing systems to converge under GHS and at the same time improve the understanding and application of precautionary statements.

9. The proposed guidance is regarded as living document subject to further development and refinement. Whereas the set of statements as proposed in the table section is regarded as comprehensive for the time being, further options could be elaborated to take the properties of products and their intended or foreseeable uses into account.

## **OPEN ISSUE**

10. The experts from IPCS have raised the question of how to address the need for special treatment to counteract the specific effects of certain substances in case of acute intoxication. This topic should be dealt with as a separate issue subject to further careful and special elaboration. It is a matter for discussion among first-aid practitioners with experience of chemical poisoning to see what degree of consensus exists on the specific first aid for certain substances.

## OUTLOOK

11. In order to facilitate the harmonized development of this guidance, the Sub-Committee should consider the advantage of a forum to convene related activities of IPCS/ICSC, ISO, ANSI, and other competent panels specifically engaged in the standardization of precautionary information both in the (M)SDS and the label statements.

12. The coding of precautionary statements has been left to further elaboration as efforts in this respect may be premature for the time being. Several codes exist in order to facilitate communication and translation. It seems to be highly desirable to develop an unified code in accordance with the GHS in progress.

## PROPOSAL

- i GHS paragraph 1.4.6.2:

Replace the fourth and fifth sentences with:

"A guidance to derive standardized precautionary information from GHS hazard statements is provided in Annex 3. It remains a goal that this guidance will be subject to a continuing process of further development."

- ii GHS Annex 3:

Replace the current Annex 3, except A3.6, by the annex to this document.

The Sub-Committee is invited to discuss the results of the Correspondence Group on Precautionary Statements, to take notice of the remarks in paras. 10-12, and to decide on the proposal as deemed appropriate.

\* \* \* \* \*

Annex

**Annex 3**

(first revision, <date>)

**PRECAUTIONARY STATEMENTS AND PRECAUTIONARY PICTOGRAMS**

### A3.1 Preface

This Annex contains a set of harmonized precautionary statements together with advice for their application. Precautionary statements form a set of elements that should be found on a GHS compliant label along with hazard statements. Supplemental information may be provided at the discretion of the manufacturer/distributor and/or regulator choice (Chapter 1.2). Information on *Directions for Use* provide one example of this type of information which is considered additional to the GHS label information.

A **Precautionary statement** is a phrase that describes recommended measures that should be taken to minimise or prevent adverse effects resulting from exposures to a hazardous product, or improper storage or handling of a hazardous product. (para 1.4.10.5.2(c)).

Existing precautionary statements have been used to the maximum extent as the basis for the development of this Annex. These existing systems have included the IPCS International Chemical Safety Card (ICSC) Compilers Guide, the American National Standards (ANSI Z129.1), and the EU system of safety phrases associated with classification and labelling directives.

The annex includes five types of precautionary statements covering: **prevention, response** in cases of accidental spillage or exposure, **storage, disposal** and **reference**<sup>1</sup>. The development of the harmonized set of precautionary statements has been linked as far as possible to each GHS hazard statement and type of hazard.

The use of harmonized statements promotes a more consistent use of precautionary statements. By linking these statements to the hazard statements of the GHS an improved understanding about appropriate precautionary behaviour is also made possible. Use of the Matrix or a Table given in the annex enables the key concepts and approaches to be emphasized in training and education activities.

The system for assigning the phrases in the annex has been developed to provide the essential minimum phrases to link existing phrases with the GHS hazard classification criteria and type of hazard. As much redundancy as possible has been removed in the wording of existing phrases, simplifying them as much as possible.

The annex should be seen as a *living document* and therefore subject to further refinement and development over time. The basic concepts of the matrix and the philosophy given below will remain.

### A3.2 Scope of Application

Hazard communication is the key means of enabling appropriate precautionary behaviour in users/consumers when handling hazardous substances and mixtures. Recognition and definition of the hazards are the first steps in ensuring safe use, storage and disposal of chemicals. Safety actions are necessarily linked to the type of hazard that exists, e.g., flammable liquids should be stored away from ignition sources. By making this link as explicit as possible the introduction of harmonized precautionary statements into the GHS will reinforce safe handling procedures. Clear plain and standardized language is necessary to convey instructions and enable their translation into languages other than English.

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<sup>1</sup> IPCS wishes to suggest a change in the column headed **Reference** so that it refers to **First-Aid. Consequential changes to the matrix are being prepared to enable consideration of this change**

The starting point for assigning precautionary statements is the hazard classification of the chemical product. The system of classifying hazards in the GHS is based fundamentally on the intrinsic properties of the chemicals involved (paragraph 1.3.2.2.1). However in certain circumstances of use e.g. consumer products, application of hazard statements may not be required if information shows that the respective risks can be excluded under conditions of normal handling, normal use or foreseeable misuse. If certain hazard statements are not required then the corresponding precautionary statements are also not necessary (paragraph A4.1.1).

### A3.3 Allocation of Precautionary Statements

This Annex sets out a matrix or table for understanding the correct application of precautionary statements. It includes elements for all categories of precautionary action. All specific elements relating to particular hazard classes should be used. General elements not linked in particular to a certain hazard class or category should also be used. An example of a general statement would be **"Read directions/label/Safety Data Sheet before use"**.

To provide flexibility in the application of precautionary phrases a combination of statements is encouraged to save label space and improve the readability of phrases. Combination of phrases can also be useful for different types of hazard where the precautionary behaviour is similar, e.g. **"Keep away from heat and ignition sources and store in a cool well ventilated place"**.

### A3.4 Structure of the Precautionary Statements

Clear plain language is essential to convey information on precautionary behaviour. However it is not necessary to insist on identical sets of words in all situations.

The tables making up the matrix show the **core part of the precautionary statements in bold print**. In circumstances where flexibility and variation are appropriate these are denoted by use of a virgule [/], the phrase *such as* or the use of *italics*.

The inclusion of a virgule [/] indicates a choice can be made between the words they separate. In these cases the manufacturer or supplier can choose the most appropriate phrase, e.g. **"in accordance with local/regional/national/international regulation"**.

Where the words "*such as*" appear in the matrix they denote the situations which should be specifically mentioned, e.g. **"Keep away from ignition sources such as heat/sparks/open flame"**.

Where conditions appear in *italics* specific care should be used when considering the form and type of the substance. The phrases should be used if the conditions are met, e.g. physico-chemical properties, type of formulation, or specific applications.

During the development of the matrix some assumptions have been made in order to rationalize the application of the relevant precautionary statement.

In the majority of cases different phrases are mutually exclusive, e.g. the phrases for explosive hazard do not modify those related to certain health hazards. In other cases the type of hazard has a bearing on the immediate precautionary behaviour required. For example, a substance which is associated with the hazard statement *fatal if swallowed* will require a more rapid response in emergency than an acutely toxic substance associated with the hazard statement *may cause kidney damage through prolonged or repeated exposure*.

Special requirements exist for some intrinsic hazardous properties, e.g. carcinogenic, mutagenic and reproductive toxins where special permits or approvals issued at the national or local level may affect the precautionary behaviour needed.

Where a substance is classified according to a number of different types of health hazard, generally the most rapid and stringent set of precautionary statements will apply. This applies mainly for the preventive measures. For example if a chemical is carcinogenic and acutely toxic then the first aid measures for acute toxicity will take precedence over those for longer term effects. On the other hand, first aid and possible medical attention is required in cases of incidental exposure, even if not associated with immediate symptoms of intoxication.

To protect illiterate consumers it might be useful to include both phrases and pictograms for protective measures because information should be conveyed in more than one way (paragraph 1.4.4.1 (a)). It should be noticed, however, that the protective effect of pictograms is limited and the examples in Annex 3 do not cover all preventive aspects to be addressed.

**<A3.5 Table Section>**

**<A3.6 Precautionary Pictograms >** to be kept as it stands now.

**EXPLOSIVES  
(CHAPTER 2.1)**

**Symbol**  
Exploding bomb

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
Division 1.1 Division 1.2 Division 1.3	Danger Danger Danger	Explosive; mass explosion hazard Explosive; severe projection hazard Explosive; fire, blast or projection hazard



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>Keep away from ignition sources such as heat/sparks/ open flame. - No smoking.</b></p> <p><b>Do not subject to rough handling such as grinding/shock/friction.</b></p> <p><b>Wear face protection.</b></p> <p><b>Keep wetted with ...</b> ... appropriate material specified by the manufacturer. <i>if drying out increases explosion hazard.</i> <i>Example: nitrocelluloses</i></p> <p><b>Ground/Bond container and receiving equipment.</b> <i>if material is for reloading.</i></p>	<p><b>** Explosion risk in case of fire.</b></p> <p><b>** Evacuate area and fight fire remotely.</b></p>			<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

**EXPLOSIVES  
(CHAPTER 2.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
Division 1.4 Division 1.5	Warning Warning	Fire or projection hazard May explode in fire

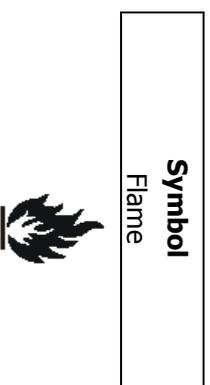
<b>Symbol</b> None
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p> <p><b>Do not subject to rough handling such as grinding/shock/friction.</b></p> <p><b>Keep wetted with ...</b>                      ... appropriate material specified by the manufacturer.  <i>if drying out increases explosion hazard.</i>  <i>Example: nitrocelluloses</i></p> <p><b>Ground/Bond container and receiving equipment.</b>  <i>if material is for reloading.</i></p>	<p><b>** Explosion risk in case of major fire and large quantities.</b></p> <p><b>** Evacuate area and fight fire remotely.</b></p>			<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially

## FLAMMABLE GASES (CHAPTER 2.2)

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
1	Danger	Extremely flammable gas	



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b>  <b>Keep away from ignition sources such as heat/ sparks/ open flame. - No smoking.</b></p> <p><i>If product is as volatile as to generate hazardous atmosphere:</i></p> <p><b>** Use explosion-proof electrical/ventilating/lighting/... equipment.</b>                      ... other specified by the manufacturer.</p> <p><b>** Take precautionary measures against static discharge.</b></p> <p><b>** Use only non-sparking tools.</b></p>	<p>Leaking gas fire: Do not extinguish, unless leak can be stopped safely.</p> <p>Eliminate all ignition sources if safe to do so.</p>	<p>Store in well-ventilated place.</p>		<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

**FLAMMABLE GASES  
(CHAPTER 2.2)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
2	Warning	Flammable gas

<b>Symbol</b> <i>None</i>
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep out of reach of children. Keep away from ignition sources such as heat/ sparks/ open flame. - No smoking.	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.	Store in well-ventilated place.		** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.

## FLAMMABLE AEROSOLS (CHAPTER 2.3)

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
1	Danger	Extremely flammable aerosol	
2	Warning	Flammable aerosol	

**Symbol**  
Flame



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children. Pressurized container: Do not pierce or burn, even after use.</b></p> <p><b>Do not spray on a naked flame or any incandescent material.</b></p> <p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p>		<p><b>Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

## OXIDIZING GASES (CHAPTER 2.4)

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
1	Danger	May cause or intensify fire; oxidizer	

**Symbol**  
Flame over circle



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep out of reach of children. Keep away from combustible materials. ** Keep reduction valves free from grease and oil.	In case of fire, stop leak if safe to do so.	Store in well-ventilated place.		** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

## GASES UNDER PRESSURE (CHAPTER 2.5)

<b>Symbol</b> Gas cylinder
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<b>Hazard Category</b>  Compressed gas Liquefied gas Dissolved gas	<b>Signal Word</b>  Warning Warning Warning	<b>Hazard Statement</b>  Contains gas under pressure; may explode if heated Contains gas under pressure; may explode if heated Contains gas under pressure; may explode if heated
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* <b>Keep out of reach of children.</b>		Store in well-ventilated place.		** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

**GASES UNDER PRESSURE  
(CHAPTER 2.5)**

<b>Symbol</b>  Gas cylinder
--

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
Refrigerated liquefied gas	Warning	Contains refrigerated gas; may cause cryogenic burns or injury

Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep out of reach of children. Wear cold insulating gloves/face shield/eye protection when operating pressure equipment.	IF ON SKIN OR CLOTHES: Rinse immediately contaminated clothes and skin with plenty of water before removing clothes. Thaw frosted parts with lukewarm water. Do not rub affected area. Seek immediate medical attention/advice.	Store in well-ventilated place.		** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

## FLAMMABLE LIQUIDS (CHAPTER 2.6)

<b>Hazard Category</b>	<b>Signal Word</b>
1	Danger
2	Danger
3	Warning

<b>Hazard Statement</b>
Extremely flammable liquid and vapour
Highly flammable liquid and vapour
Flammable liquid and vapour



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Keep container tightly closed.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Ground/Bond container and receiving equipment.</b></p> <p><i>if material is for reloading.</i> <i>If product is as volatile as to generate hazardous atmosphere:</i></p> <p><b>** Use explosion-proof electrical/ventilating/lighting/... equipment:</b> ... other specified by the manufacturer.</p> <p><b>** Take precautionary measures against static discharge.</b></p> <p><b>** Use only non-sparking tools.</b></p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk.</i></p>	<p><b>Store in cool/well-ventilated place.</b></p>	<p><b>Dispose of this material and its container to ...:</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**FLAMMABLE LIQUIDS  
(CHAPTER 2.6)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
4	Warning	Combustible liquid

<b>Symbol</b> <i>None</i>
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Keep away from flames and hot surfaces.</b></p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk.</i></p>		<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**FLAMMABLE SOLIDS  
(CHAPTER 2.7)**

**Hazard Category**                      **Signal Word**

1    Danger  
2    Danger

**Hazard Statement**

Flammable solid  
Flammable solid

<p><b>Symbol</b> Flame</p>
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Keep away from ignition sources such as heat/sparks/ open flame. - No smoking.</b></p> <p><b>** Use explosion-proof electrical/ventilating/lighting/... equipment.</b> ... other specified by the manufacturer. <i>if dust clouds can occur.</i></p> <p><b>Ground/Bond container and receiving equipment.</b> <i>if material is for reloading.</i></p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk..</i></p>			<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**SELF-REACTIVE SUBSTANCES  
(CHAPTER 2.8)**

**Hazard Category**                      **Signal Word**                      **Hazard Statement**

Type A                                      Danger                                      Heating may cause an explosion

**Symbol**  
Exploding bomb



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b> suitable material specified by the manufacturer.</p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p> <p><b>Keep away from ...</b> ... incompatible materials specified by the manufacturer.</p> <p><b>** Keep only in original container.</b></p>	<p><b>** Explosion risk in case of fire.</b></p> <p><b>** Evacuate area and fight fire remotely.</b></p> <p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk..</i></p>	<p><b>Store in cool/well-ventilated place.</b></p> <p><b>Store at temperatures not exceeding ...°C/...°F.</b> ... specified by the manufacturer</p> <p><b>Store away from other materials.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.



**SELF-REACTIVE SUBSTANCES**  
**(CHAPTER 2.8)**

<b>Symbol</b> Flame
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<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
Type C Type E Type E Type F	Danger Danger Warning Warning	Heating may cause a fire Heating may cause a fire Heating may cause a fire Heating may cause a fire	

<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>* Keep out of reach of children.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p> <p><b>Keep away from ... :</b> ... incompatible materials specified by the manufacturer.</p> <p><b>** Keep only in original container.</b></p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk.</i></p>	<p><b>Store in cool/well-ventilated place.</b></p> <p><b>Store at temperatures not exceeding ... °C/...°F.</b> ... specified by the manufacturer</p> <p><b>Store away from other materials.</b></p>	<p><b>Dispose of this material and its container to ... :</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.



**PYROPHORIC SOLIDS  
(CHAPTER 2.10)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> Flame
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1	Danger	Catches fire spontaneously if exposed to air	
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<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>Do not allow contact with air.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk..</i></p>	<p><b>Store contents under ...</b> ... appropriate liquid or inert gas specified by the manufacturer.</p>		<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

**SELF-HEATING SUBSTANCES  
(CHAPTER 2.11)**

**Hazard Category**                      **Signal Word**

1    Danger  
2    Warning

**Hazard Statement**

Self-heating; may catch fire  
Self-heating in large quantities; may catch fire

<p><b>Symbol</b> Flame</p>
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>Keep cool and protect from sunlight.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p>		<p><b>** Store away from other materials.</b></p> <p><b>Store bulk masses greater than ... kg/... lbs at temperatures not exceeding ... °C/... °F.</b> ... specified by the manufacturer</p> <p><b>Maintain air gap between stacks/pallets.</b></p>		<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

**SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES  
(CHAPTER 2.12)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> Flame
1	Danger	In contact with water releases flammable gases, which may ignite spontaneously	
2	Danger	In contact with water releases flammable gas	

<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>Keep from any possible contact with water, because of violent reaction and possible flash fire.</b></p> <p><b>Handle under inert gas, protect from moisture.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>If water increases risk..</i></p>	<p><b>Store in a dry place and/or in closed container.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

**SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES  
(CHAPTER 2.12)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> Flame
3	Warning	In contact with water releases flammable gas	

Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>Handle under inert gas, protect from moisture.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk.</i></p>	<p><b>Store in a dry place and/or in closed container.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

## OXIDIZING LIQUIDS (CHAPTER 2.13)

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
1	Danger	May cause fire or explosion; strong oxidizer	

**Symbol**  
Flame over circle



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>Keep away from heat.</b></p> <p><b>Keep away from clothing and other combustible materials.</b></p> <p><b>Wear fire/flame resistant/retardant clothing.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Do not unintentionally mix with combustibles/...</b> ... other incompatible materials specified by the manufacturer.</p>	<p><b>** Explosion risk in case of major fire and large quantities.</b></p> <p><b>** Evacuate area and fight fire remotely.</b></p> <p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk.</i></p> <p><b>IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.</b></p>	<p><b>Store away from combustibles/...</b> ... other incompatible materials specified by the manufacturer.</p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

## OXIDIZING LIQUIDS (CHAPTER 2.13)

Hazard Category	Signal Word	Hazard Statement
2	Danger	May intensify fire; oxidizer
3	Warning	May intensify fire; oxidizer

<b>Symbol</b> Flame over circle
------------------------------------



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Keep away from heat.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Do not unintentionally mix with combustibles/....</b>                      ... other incompatible materials specified by the manufacturer.</p>	<p><b>In case of fire, use ... for extinction.</b>                      ... appropriate media specified by the manufacturer.  <i>If water increases risk..</i></p>	<p><b>Store away from combustibles/...</b>                      ... other incompatible materials specified by the manufacturer.</p>	<p><b>Dispose of this material and its container to ...</b>                      ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.



**OXIDIZING SOLIDS**  
**(CHAPTER 2.14)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
2	Danger	May intensify fire; oxidizer
3	Warning	May intensify fire; oxidizer

<p><b>Symbol</b></p> <p>Flame over circle</p>
---



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Keep away from heat.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Do not unintentionally mix with combustibles/....</b> ... other incompatible materials specified by the manufacturer.</p>	<p><b>In case of fire, use ... for extinction.</b> ... appropriate media specified by the manufacturer. <i>if water increases risk.</i></p>	<p><b>Store away from combustibles/...</b> ... other incompatible materials specified by the manufacturer.</p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**ORGANIC PEROXIDES  
(CHAPTER 2.15)**

**Symbol**  
Exploding bomb

**Hazard Category**

**Signal Word**

**Hazard Statement**

Type A

Danger

Heating may cause an explosion



<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p> <p><b>Keep away from ...</b> ... incompatible materials specified by the manufacturer.</p> <p><b>Wear protective gloves/clothing.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>** Keep only in original container.</b></p>		<p><b>Store away from other materials.</b></p> <p><b>Store in cool place at temperatures not exceeding ...°C/...°F.</b> ... specified by the manufacturer</p> <p><b>Protect from sunlight.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

**ORGANIC PEROXIDES  
(CHAPTER 2.15)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
Type B	Danger	Heating may cause a fire or explosion	

<p><b>Symbol</b></p> <p>Exploding bomb and flame over circle</p>
--



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p> <p><b>Keep away from ... :</b> ... incompatible materials specified by the manufacturer.</p> <p><b>** Keep only in original container.</b></p> <p><b>Wear protective gloves/clothing.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p>		<p><b>Store away from other materials.</b></p> <p><b>Store in cool place at temperatures not exceeding ...°C/...°F.</b> ... specified by the manufacturer</p> <p><b>Protect from sunlight.</b></p>	<p><b>Dispose of this material and its container to ... :</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

**ORGANIC PEROXIDES**  
**(CHAPTER 2.15)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> Flame over circle
Type C Type D Type E Type F	Danger Danger Warning Warning	Heating may cause a fire Heating may cause a fire Heating may cause a fire Heating may cause a fire	

<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>Keep away from ignition sources such as heat/sparks/open flame. - No smoking.</b></p> <p><b>Keep away from ...</b> ... incompatible materials specified by the manufacturer.</p> <p><b>** Keep only in original container.</b></p> <p><b>Wear protective gloves/clothing.</b> suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p>		<p><b>Store away from other materials.</b></p> <p><b>Store in cool place at temperatures not exceeding ...°C/...°F.</b> ... specified by the manufacturer</p> <p><b>Protect from sunlight.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\*\* if likely to be used commercially.

**CORROSIVE TO METALS  
(CHAPTER 2.16)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
1	Warning	May be corrosive to metals

<p align="center"><b>Symbol</b> Corrosion</p>
---



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep only in original container.	Absorb spillage to prevent material-damage.	Store in corrosive resistant/... container. ... other compatible materials specified by the manufacturer.		

\* if likely to be used by the general public.

**ACUTE TOXICITY – ORAL**  
**(CHAPTER 3.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b>
1	Danger	Fatal if swallowed	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Skull and crossbones</b> </div>
2	Danger	Fatal if swallowed	



<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p>* Keep out of reach of children.</p> <p>* Do not eat, drink or smoke when using this product.</p> <p>* Wash hands thoroughly after handling.</p> <p><b>Avoid all contact.</b></p>	<p><b>IF SWALLOWED:</b> Immediately call a <b>POISON CONTROL CENTER</b>/doctor/physician.</p> <p>Show container/label/Safety Data Sheet when possible.</p> <p><b>Induce vomiting (if conscious).</b></p> <p>- <i>If knowledge of the chemical indicates this action is not contraindicated.</i></p> <p><b>Give water/nothing to drink.</b></p> <p><b>Give a slurry of activated charcoal</b></p> <p>- <i>If ingestion of a solid water soluble substance</i></p>	<p>* Store locked up.</p>	<p><b>Dispose of this material and its container to ...</b></p> <p>... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p> <p><b>Specific treatment is urgent (see ... on this label)</b></p> <p>... reference to Supplemental First Aid Instruction.</p> <p><i>If immediate administration of antidote is required.</i></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**ACUTE TOXICITY – ORAL**  
**(CHAPTER 3.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
3	Danger	Toxic if swallowed

<b>Symbol</b> Skull and crossbones
---------------------------------------



**Precautionary Statements**

<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
* Keep out of reach of children. * Do not eat, drink or smoke when using this product. * Wash hands thoroughly after handling.	<b>IF SWALLOWED:</b> Immediately call a POISON CONTROL CENTER/ doctor/ physician. Show container/label/Safety Data Sheet when possible. Give water/ nothing to drink. Induce vomiting (if conscious). - if knowledge of the chemical indicates this action is not contraindicated.	* Store locked up.	<b>Dispose of this material and its container to ...</b> ... in accordance with local/ regional/national/international regulation).	** Read directions/label/Safety Data Sheet before use. <b>Specific treatment is urgent (see ... on this label)</b> ... reference to Supplemental First Aid Instruction. If immediate administration of antidote is required.

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.



**ACUTE TOXICITY – ORAL  
(CHAPTER 3.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> <i>None</i>
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5	Warning	May be harmful if swallowed	
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
Keep out of reach of children.	Call a <b>POISON CONTROL CENTER</b> /doctor/physician if you feel unwell.  Show container/label/Safety Data Sheet when possible.			Read label before use.

This Hazard Category may be used in some countries for products likely to be used by the general public.

**ACUTE TOXICITY – DERMAL  
(CHAPTER 3.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b>
1	Danger	Fatal in contact with skin	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Skull and crossbones</b> </div>
2	Danger	Fatal in contact with skin	



<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p>* <b>Keep out of reach of children.</b></p> <p>* <b>Do not eat, drink or smoke when using this product.</b></p> <p>* <b>Wash hands thoroughly after handling.</b></p> <p><b>Avoid all contact.</b></p> <p><b>Wear protective gloves/clothing.</b> Suitable material specified by the manufacturer.</p>	<p><b>IF ON SKIN: Wash with plenty of soap and water/...</b> ... appropriate cleansing agent specified by the manufacturer.</p> <p><b>Remove/Take off immediately all contaminated clothing.</b></p> <p><b>Call a POISON CONTROL CENTER/doctor/physician.</b></p> <p><b>Show container/label/Safety Data Sheet when possible.</b></p> <p><b>Wash/Decontaminate removed clothing before reuse.</b></p>	<p>* <b>Store locked up.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p> <p><b>Specific treatment is urgent (see ... on this label)</b> ... reference to Supplemental First Aid Instruction. <i>if immediate administration of antidote is required.</i></p>

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

**ACUTE TOXICITY – DERMAL  
(CHAPTER 3.1)**

**Hazard Category**

**Signal Word**

**Hazard Statement**

**Symbol**  
Skull and crossbones

3

Danger

Toxic in contact with skin



**Precautionary Statements**

<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>* Keep out of reach of children.</b> <b>Wear protective gloves/clothing.</b> suitable material specified by the manufacturer.</p>	<p><b>IF ON SKIN: Wash with plenty of soap and water/...</b> ... appropriate cleansing agent specified by the manufacturer. <b>Remove/Take off immediately all contaminated clothing.</b> <b>Call a POISON CONTROL CENTER/doctor/physician if you feel unwell.</b> <b>Show container/label/Safety Data Sheet when possible.</b> <b>Wash/Decontaminate removed clothing before reuse.</b></p>	<p><b>* Store locked up.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b> <b>Specific treatment is urgent (see ... on this label)</b> ... reference to Supplemental First Aid Instruction. <i>if immediate administration of antidote is required.</i></p>

\* if likely to be used by the general public.

\*\* if likely to be used commercially.



**ACUTE TOXICITY – DERMAL  
(CHAPTER 3.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> <i>None</i>
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5	Warning	May be harmful in contact with skin	
---	---------	-------------------------------------	--

Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
Keep out of reach of children. Wear protective gloves.	Call a POISON CONTROL CENTER/doctor/physician if you feel unwell.			Read label before use.

This Hazard Category may be used in some countries for products likely to be used by the general public.

**ACUTE TOXICITY – INHALATION**  
**(CHAPTER 3.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> Skull and crossbones
------------------------	--------------------	-------------------------	---------------------------------------

- |   |        |                  |   |
|---|--------|------------------|---|
| 1 | Danger | Fatal if inhaled |  |
| 2 | Danger | Fatal if inhaled |   |

<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>* Keep out of reach of children.</b> <b>Do not breathe dust/fume/gas/mist/vapours/spray.</b> <b>Use appropriate ventilation.</b> <b>Wear respiratory protection.</b> as specified by the manufacturer.</p>	<p><b>IF INHALED:</b> Remove victim to fresh air and keep at rest. Keep in half-upright position if breathing is difficult. <b>Immediately call a POISON CONTROL CENTER/doctor/physician.</b> <b>Show container/label/Safety Data Sheet when possible.</b></p>	<p><b>* Store locked up.</b> <b>Store container tightly closed in well-ventilated place.</b> <i>if product is as volatile as to generate hazardous atmosphere.</i></p>		<p><b>** Read directions/label/Safety Data Sheet before use.</b> <b>Specific treatment is urgent (see ... on this label)</b> ... reference to Supplemental First Aid Instruction. <i>if immediate administration of antidote is required.</i></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**ACUTE TOXICITY – INHALATION  
(CHAPTER 3.1)**

**Hazard Category**

**Signal Word**

**Hazard Statement**

3

Danger

Toxic if inhaled

**Symbol**  
Skull and crossbones



**Precautionary Statements**

<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p>* Keep out of reach of children. Use appropriate ventilation. Avoid breathing dust/fume/gas/mist/vapour/spray.</p>	<p><b>IF INHALED:</b> Remove to fresh air and keep at rest. Keep in half-upright position if breathing is difficult. Immediately call a <b>POISON CONTROL CENTER</b>/doctor/physician. Show container/label/Safety Data Sheet when possible.</p>	<p>* Store locked up. Store container tightly closed in well-ventilated place. <i>if product is as volatile as to generate hazardous atmosphere.</i></p>		<p>** Read directions/label/Safety Data Sheet before use. <b>Specific treatment is urgent (see ... on this label)</b> ... reference to Supplemental First Aid Instruction. <i>if immediate administration of antidote is required.</i></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**ACUTE TOXICITY – INHALATION  
(CHAPTER 3.1)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
4	Warning	Harmful if inhaled

<b>Symbol</b> Exclamation mark
-----------------------------------



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep out of reach of children. Use appropriate ventilation. Avoid breathing dust/fume/ gas/mist/vapours/spray.	IF INHALED: Remove to fresh air and keep at rest. Keep in half-upright position if breathing is difficult.			** Read directions/label/Safety Data Sheet before use.
	Call a POISON CONTROL CENTER/doctor/physician. Show container/label/Safety Data Sheet when possible.			

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

**ACUTE TOXICITY – INHALATION  
(CHAPTER 3.1)**

**Hazard Category**                      **Signal Word**                      **Hazard Statement**

5    Warning                                      May be harmful if inhaled

<b>Symbol</b> <i>None</i>
------------------------------

Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
Keep out of reach of children. Use appropriate ventilation.	Call a <b>POISON CONTROL CENTER</b> /doctor/physician if you feel unwell. Show container/label/Safety Data Sheet when possible.			Read label before use.

This Hazard Category may be used in some countries for products likely to be used by the general public.

## SKIN CORROSION/IRRITATION (CHAPTER 3.2)

**Hazard Category**

**Signal Word**

**Hazard Statement**

<p><b>Symbol</b> Corrosion</p> 
--

IA to 1C

Danger

Causes severe skin burns and eye damage

### Precautionary Statements

Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Wear protective gloves/clothing.</b> Suitable material specified by the manufacturer.</p> <p><b>Wear eye/face protection.</b></p> <p><b>Wash thoroughly after handling.</b></p> <p><b>Do not breathe dust or mist.</b> <i>if inhalable particles may occur during use.</i></p>	<p><b>IF ON SKIN: Remove/Take off immediately all contaminated clothing under the shower and wash skin with plenty of soap and water/... other cleansing agent specified by the manufacturer.</b></p> <p><b>IF IN EYES: Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</b></p> <p><b>IF SWALLOWED: Rinse mouth.</b></p> <p><b>Do NOT induce vomiting.</b></p> <p><b>IF INHALED: Remove to fresh air. Keep at rest in half-upright position if breathing is difficult.</b></p> <p><b>Call a POISON CONTROL CENTER/doctor/physician.</b></p> <p><b>Show container/label/Safety Data Sheet when possible.</b></p>	<p><b>* Store locked up.</b></p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p> <p><b>Specific treatment is urgent (See ... on this label)</b> ... reference to Supplemental First Aid Instruction. <i>if immediate administration of antidote is required.</i></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

## SKIN CORROSION/IRRITATION (CHAPTER 3.2)

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
2	Warning	Causes skin irritation	

**Symbol**  
Exclamation mark



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Wear protective gloves.</b> suitable material specified by the manufacturer.</p> <p><b>* Wash thoroughly after handling.</b></p>	<p><b>IF ON SKIN: Wash with plenty of soap and water/ ...</b> ... other cleansing agent specified by the manufacturer.</p> <p><b>If skin irritation occurs, seek medical advice/ attention.</b></p> <p><b>Show container/label/Safety Data Sheet when possible.</b></p>			<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**SKIN CORROSION/IRRITATION  
(CHAPTER 3.2)**

<b>Symbol</b> <i>None</i>
------------------------------

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
3	Warning	Causes mild skin irritation

Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
Avoid prolonged/repeated contact with skin.	If skin irritation occurs, get medical advice/attention. Show container/label/Safety Data Sheet when possible.			Read label before use.

**EYE DAMAGE/IRRITATION  
(CHAPTER 3.3)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
1	Danger	Causes serious eye damage

<b>Symbol</b> Corrosion
----------------------------



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep out of reach of children. Wear eye/face protection.	IF IN EYES: Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.			** Read directions/label/Safety Data Sheet before use.
	Call a POISON CONTROL CENTER/doctor/physician. Show container/label/Safety Data Sheet when possible.			

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

**EYE DAMAGE/IRRITATION  
(CHAPTER 3.3)**

<p><b>Symbol</b> Exclamation mark</p>
---

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
2A	Warning	Causes serious eye irritation



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep out of reach of children.	<p><b>IF IN EYES:</b> Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>If eye irritation persists, get medical advice/attention.</p> <p>Show container/label/Safety Data Sheet when possible.</p>			** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

**EYE DAMAGE/IRRITATION  
(CHAPTER 3.3)**

**Hazard Category**                      **Signal Word**                      **Hazard Statement**

2B    Warning                                      Causes eye irritation

<b>Symbol</b> <i>None</i>
------------------------------

Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
* Keep out of reach of children.	<b>IF IN EYES:</b> Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  If eye irritation persists, get medical advice/attention.  Show container/label/Safety Data Sheet when possible.			** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**SENSITIZATION - RESPIRATORY**  
**(CHAPTER 3.4)**

**Hazard Category**

**Signal Word**

**Hazard Statement**

**Symbol**  
Health hazard

1

Danger

May cause allergy or asthma symptoms or breathing difficulties if inhaled



**Precautionary Statements**

Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>Avoid breathing dust/fume/gas/mist/vapour/spray.</b></p> <p><b>In case of inadequate ventilation wear respiratory protection, suitable type specified by the manufacturer.</b></p>	<p><b>IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in half-upright position.</b></p> <p><b>Call a POISON CONTROL CENTER/doctor/physician.</b></p> <p><b>Show container/label/Safety Data Sheet when possible.</b></p>		<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.

\*\* if likely to be used commercially.

**SENSITIZATION - SKIN  
(CHAPTER 3.4)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> Exclamation mark
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1	Warning	May cause an allergic skin reaction	
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<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>* Keep out of reach of children.</b>  <b>Wear protective gloves.</b> suitable material specified by the manufacturer.  <b>Avoid breathing dust/fume/gas/mist/vapour/spray.</b>  <b>** Contaminated work clothing should not be allowed out of the workplace.</b></p>	<p><b>IF ON SKIN: Wash with plenty of soap and water/...</b> ... other cleansing agent specified by the manufacturer.  <b>If skin irritation occurs, seek medical advice/attention.</b>  <b>Show container/label/Safety Data Sheet when possible.</b>  <b>Wash contaminated clothing before reuse.</b></p>			<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
 \*\* if likely to be used commercially.

**GERM CELL MUTAGENICITY  
(CHAPTER 3.5)**

<b>Symbol</b>  Health hazard
---

**Hazard Category**                      **Signal Word**

- |   |         |
|---|---------|
| 1 | Danger  |
| 2 | Warning |

**Hazard Statement**

May cause genetic defects <...>  
 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	Reference
* Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid all contact. Use Personal Protective Equipment as required.	IF ANY CONTACT: Get medical attention/advice. Show container/label/Safety Data Sheet when possible.	* Store locked up.	Dispose of this material and its container to ... : ... In accordance with local/regional/national/international regulation).	Obtain special instructions before use.

\* if likely to be used by the general public.

**CARCINOGENICITY  
(CHAPTER 3.6)**

**Symbol**

**Hazard Category**                      **Signal Word**

1    Danger

2    Warning

**Hazard Statement**

May cause cancer <...>  
Suspected of causing cancer < >

<...>                      *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard.)*



<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<p><b>* Keep out of reach of children.</b></p> <p><b>Do not handle until all safety precautions have been read and understood.</b></p> <p><b>Avoid all contact.</b></p> <p><b>Use Personal Protective Equipment as required.</b></p>	<p><b>IF ANY CONTACT: Get medical attention/advice.</b></p> <p><b>Show container/label/Safety Data Sheet when possible.</b></p>	<p><b>* Store locked up.</b></p>	<p><b>Dispose of this material and its container to ... :</b></p> <p>... in accordance with local/regional/national/international regulation).</p>	<p><b>Obtain special instructions before use.</b></p>

\* if likely to be used by the general public.

**TOXIC TO REPRODUCTION**  
**(CHAPTER 3.7)**

**Symbol**  
Health Hazard

**Hazard Category**                      **Signal Word**

1    Danger  
2    Warning

**Hazard Statement**

May damage fertility or the unborn child <...> <<...>>  
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	Reference
<p>* Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid all contact. Use Personal Protective Equipment as required.</p>	<p><b>IF ANY CONTACT:</b> Get medical attention/advice. Show container/label/Safety Data Sheet when possible.</p>	<p>* Store locked up.</p>	<p><b>Dispose of this material and its container to ... :</b> ... in accordance with local/regional/national/international regulation).</p>	<p>Obtain special instructions before use.</p>

\* if likely to be used by the general public.

**TOXIC TO REPRODUCTION  
(CHAPTER 3.7)  
(EFFECTS ON OR VIA LACTATION)**

**Hazard Category** *(additional)*      **Signal Word** *No signal word*      **Hazard Statement** *May cause harm to breast-fed children*

<b>Symbol</b> <i>None</i>
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Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
<p><b>Avoid contact during pregnancy/while nursing.</b></p> <p><b>* Do not eat, drink or smoke when using this product.</b></p> <p><b>* Wash hands thoroughly after handling.</b></p> <p><b>Do not breathe dust or mist.</b> <i>if inhalable particles may occur during use</i></p>	<p><b>IF ANY CONTACT:</b> Get medical attention/advice.</p> <p><b>Show container/label/Safety Data Sheet when possible.</b></p>			<p><b>Obtain special instructions before use.</b></p>

\* if likely to be used by the general public.

**TARGET ORGAN SYSTEMIC TOXICITY (Single Exposure)**  
**(CHAPTER 3.8)**

<b>Symbol</b> Health Hazard
--------------------------------

**Hazard Category**

**Signal Word**

**Hazard Statement**

1

Danger

Causes damage to <...> if <<...>>



<...> (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected.)  
<<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard.)

**Precautionary Statements**

Prevention	Response	Storage	Disposal	Reference
<p>* Keep out of reach of children.</p> <p>* Do not eat, drink or smoke when using this product.</p> <p>* Wash hands thoroughly after handling.</p> <p><b>Avoid all contact.</b></p> <p><b>Do not breathe dust or mist.</b> <i>If inhalable particles may occur during use.</i></p>	<p><b>IF SWALLOWED:</b> Immediately call a <b>POISON CONTROL CENTER</b>/doctor/physician.</p> <p>Show container/label/Safety Data Sheet when possible.</p> <p><b>Induce vomiting (if conscious).</b> - <i>If knowledge of the chemical indicates this action is not contraindicated.</i></p>	<p>* Store locked up.</p>	<p><b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p> <p><b>Specific treatment is urgent (see ... on this label)</b> ... reference to Supplemental First Aid Instruction. <i>if immediate administration of antidote is required.</i></p>

\* if likely to be used by the general public.

\*\* if likely to be used commercially.

**TARGET ORGAN SYSTEMIC TOXICITY (Single Exposure)**  
**(CHAPTER 3.8)**

**Symbol**  
Health hazard

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
2	Warning	May cause damage to <...> if <<...>>	

<...> *(state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected.)*  
<<...>> *(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard.)*



**Precautionary Statements**

Prevention	Response	Storage	Disposal	Reference
<p><b>* Keep out of reach of children.</b></p> <p><b>* Do not eat, drink or smoke when using this product.</b></p> <p><b>* Wash hands thoroughly after handling.</b></p> <p><b>Do not breathe dust or mist if inhalable particles may occur during use.</b></p>	<p><b>Call a POISON CONTROL CENTER/doctor/physician if you feel unwell.</b></p> <p><b>Show container/label/Safety Data Sheet when possible.</b></p>		<p><b>Dispose of this material and its container to ... :</b></p> <p>... in accordance with local/regional/national/international regulation).</p>	<p><b>** Read directions/label/Safety Data Sheet before use.</b></p>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.





**AQUATIC ENVIRONMENT - ACUTE HAZARD  
(CHAPTER 3.10)**

<b>Symbol</b> Environment
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<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	
1	Warning	Very toxic to aquatic life	



Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
Do not contaminate surface water.	Collect spillage.		Dispose of this material and its container to ... ... in accordance with local/regional/national/international regulation).	* ** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**AQUATIC ENVIRONMENT - ACUTE HAZARD  
(CHAPTER 3.10)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>
2	Warning	Toxic to aquatic life
3	No signal word	Harmful to aquatic life

<b>Symbol</b> <i>None</i>
------------------------------

Precautionary Statements				
Prevention	Response	Storage	Disposal	Reference
			<b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).	* ** Read directions/label/Safety Data Sheet before use.

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**AQUATIC ENVIRONMENT - CHRONIC HAZARD**  
**(CHAPTER 3.10)**

<b>Hazard Category</b>	<b>Signal Word</b>	<b>Hazard Statement</b>	<b>Symbol</b> Environment
1	Warning	Very toxic to aquatic life with long lasting effects	
2	Warning	Toxic to aquatic life with long lasting effects	

<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
<b>Do not contaminate surface water.</b>	<b>Collect spillage.</b>		<b>Dispose of this material and its container to ...</b> ... in accordance with local/ regional/national/international regulation).	<b>* ** Read directions/label/Safety Data Sheet before use.</b>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.

**AQUATIC ENVIRONMENT - CHRONIC HAZARD**  
**(CHAPTER 3.10)**

**Hazard Category**                      **Signal Word**

3    *No signal word*

4    *No signal word*

**Hazard Statement**

Harmful to aquatic life with long lasting effects  
May cause long lasting harmful effects to aquatic life

<b>Symbol</b> <i>None</i>
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<b>Precautionary Statements</b>				
<b>Prevention</b>	<b>Response</b>	<b>Storage</b>	<b>Disposal</b>	<b>Reference</b>
			<b>Dispose of this material and its container to ...</b> ... in accordance with local/regional/national/international regulation).	* ** <b>Read directions/label/Safety Data Sheet before use.</b>

\* if likely to be used by the general public.  
\*\* if likely to be used commercially.