Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

29 November 2012

Sub-Committee of Experts on the Transport of Dangerous Goods

Forty-second session

Geneva, 3–11 December 2012 Item 8 (e) of the provisional agenda

Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals: Miscellaneous

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

Twenty-fourth session

Geneva, 12–14 December 2012 Item 2 (d) of the provisional agenda

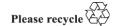
Updating of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Annexes

Amendments to precautionary statement P280

Transmitted by the expert from the United Kingdom on behalf of the informal correspondence group on Annexes 1-3 of the GHS

Introduction

- 1. This paper proposes an adjustment to one of the proposals in ST/SG/AC.10/C.4/2012/19 to amend the precautionary statements in Annex 3 of the GHS. The adjustment addresses an issue that arose during completion of information document INF.5 (GHS, 24th session) –INF.8 (TDG, 42nd session).
- 2. Precautionary statement P280 currently reads "Wear protective gloves/protective clothing/eye protection/face protection." The conditions for use contain further instructions on the type of equipment to be specified for some hazard classes, e.g. "specify protective gloves/clothing. Manufacturer/supplier or the competent authority to specify type of equipment." However it is not clear whether in this case the label should just read "Wear protective gloves/clothing", or whether an additional specification of the type of gloves or clothing should be made.
- 3. The proposal below makes it clear that an additional specification of the type of equipment, for example, to specify the material of gloves that are required (e.g. "wear nitrile gloves") may be appropriate.
- 4. For some hazard classes, it has been proposed in ST/SG/AC.10/C.4/2012/19 to remove the specific instruction as to the type of equipment, so that the condition for use simply reads "manufacturer/supplier or the competent authority to specify the appropriate type of equipment". In these cases no change is required since the intention is already clear.
- 5. Table A3.2.2 and the matrix tables in A3.3.5 of the GHS, as amended to take into account the new condition for use for P280 proposed in this document are reproduced in annexes 1 and 2.



Proposal

6. Replace the amendment to P280 in document ST/SG/AC.10/C.4/2012/19 and in annex 1 to informal document INF.5 (GHS) – INF.8 (TDG), with the following:

"For P280

For Explosives (chapter 2.1):

Remove the condition for use "- *specify face protection*" and amend the remaining wording to read: "manufacturer/supplier or the competent authority to specify the appropriate type of equipment".

For the group of hazard classes "Acute toxicity (dermal)", "Skin corrosion", "skin irritation", "skin sensitisation", "severe eye damage" and "eye irritation":

in the condition for use, *replace* "Manufacturer/supplier or the competent authority to specify type of equipment" *with* "Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate".

For the group of hazard classes "Flammable liquids", "Flammable solids", "self-reactive substances and mixtures", "pyrophoric liquids", "pyrophoric solids", "self-heating substances and mixtures", "Substances and mixtures which, in contact with water, emit flammable gases", "oxidizing liquids", "oxidizing solids" and "Organic peroxides":

remove the condition for use: "- specify protective gloves and eye/face protection" and amend the remaining wording to read: "manufacturer/supplier or the competent authority to specify the appropriate type of equipment".

For the group of hazard classes "Germ cell mutagenicity", "carcinogenicity" and "reproductive toxicity":

amend the condition for use to read "manufacturer/supplier or the competent authority to specify the appropriate type of equipment"."

Changes to precautionary statement P280 in table A3.2.2

Code	Prevention precautionary statements	Hazard class	Hazard category	Conditions for use	Explanation/Justification
(1)	(2)	(3)	(4)	(5)	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	Explosives (chapter 2.1)	Unstable explosives and divisions 1.1, 1.2, 1.3, 1.4, 1.5	Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	Slash is appropriate because manufacturer/supplier or the competent authority should choose which phrase is appropriate. Proposal to amend the conditions for use: Face protection is not always appropriate, appropriate protection should rather be specified.
		Flammable liquids (chapter 2.6)	1, 2, 3, 4	Manufacturer/supplier or the	Proposal to amend the
		Flammable solids (chapter 2.7)	1, 2	competent authority to specify the	conditions for use:
		Self-reactive substances and mixtures (chapter 2.8)	Types A, B, C, D, E, F	appropriate type of equipment.	Appropriate protection should be specified.
		Pyrophoric liquids (chapter 2.9)	1		
		Pyrophoric solids (chapter 2.10)	1		
		Self-heating substances and mixtures (chapter 2.11)	1, 2		
		Substances and mixtures which, in contact with water, emit flammable gases (chapter 2.12)	1, 2, 3		

Code	Prevention precautionary statements	Hazard class	Hazard category	Conditions for use	Explanation/Justification
(1)	(2)	(3)	(4)	(5)	
		Oxidizing liquids (chapter 2.13)	1, 2, 3		
		Oxidizing solids (chapter 2.14)	1, 2, 3		
		Organic peroxides (chapter 2.15)	Types A, B, C, D, E, F		
		Acute toxicity – dermal (chapter 3.1)	1, 2, 3, 4	- Specify protective gloves/clothing. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	Proposal to amend the conditions for use: The proposal makes it clear that an additional
		Skin corrosion (chapter 3.2)	1A, 1B, 1C	- Specify protective gloves/clothing and eye/face protection. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	specification of the type of equipment, for example, to specify the material of gloves that are required (e.g. "wear nitrile gloves") may be appropriate.
		Skin irritation (chapter 3.2)	2	- Specify protective gloves.	
		Skin sensitization (chapter 3.4)	1, 1A, 1B	Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	
		Severe eye damage (chapter 3.3)	1	- Specify eye/face protection.	
		Eye irritation (chapter 3.3)	2A	Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	
		Germ cell mutagenicity (chapter 3.5)	1A, 1B, 2	Manufacturer/supplier or the	Proposal to amend the
		Carcinogenicity (chapter 3.6)	1A, 1B, 2	competent authority to specify the	conditions for use:
		Reproductive toxicity (chapter 3.7)	1A, 1B, 2		Appropriate protection should be specified.

Annex 2

Tables in A3.3.5 of the GHS as amended to take into account the new condition for use for P280 proposed in this document

EXPLOSIVES (Chapter 2.1)

Symbol Exploding bomb

Hazard category Signal word Hazard statement

Unstable explosive Danger H200 Unstable explosive



Precautionary statements					
Prevention	Response	Storage	Disposal		
P201 Obtain special instructions before use. P250 Do not subject to grinding/shock/friction/ if the explosive is mechanically sensitiveManufacturer/supplier or the competent authority to specify applicable rough handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370+P372+P380+P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives	Store in accordance withManufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	Dispose of contents/container toin accordance with local/regional/ national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.		

EXPLOSIVES (Chapter 2.1)

Symbol Exploding bomb

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		
Prevention P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P230 Keep wetted with - 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). Manufacturer/supplier or the competent authority to specify appropriate material. - P234 Keep only in original packaging. P240	Response P370 +P372+P380+P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.	P401 Store in accordance withManufacturer/supplier or the competent authority to specify local/regional/national/international regulations as applicable.	P501 Dispose of contents/container to in accordance with local/ regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.		
Groundand bond container and receiving equipment.					
- if the explosive is electrostatically sensitive. P250					
Do not subject to grinding/shock/friction/ if the explosive is mechanically sensitive.					
Manufacturer/supplier or the competent authority to specify applicable rough handling.					
P280 Wear protective gloves/protective					

clothing/eye protection/face protection.	
Manufacturer/supplier or the competent	
authority to specify the appropriate type of	
equipment.	

EXPLOSIVES

(Chapter 2.1)

Symbol Exploding bomb

Hazard category

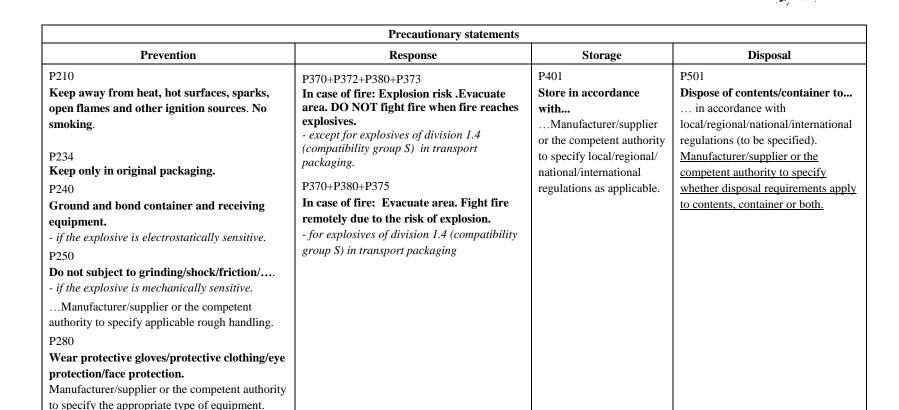
Signal word

Hazard statement

Division 1.4

Warning

H204 Fire or projection hazard



EXPLOSIVES

(Chapter 2.1)

Symbol No symbol

Hazard category

Signal word

Hazard statement

Division 1.5 Danger H205 May mass explode in fire

Precautionary statements					
Prevention	Response	Storage	Disposal		
P210	P370 + P372 + P380 + P373	P401	P501		
Keep away from heat, hot surfaces, sparks,	In case of fire: Explosion risk. Evacuate	Store in accordance with	Dispose of contents/container to		
open flames and other ignition sources. No	area. DO NOT fight fire when fire	Manufacturer/supplier or	in accordance with local/regional/		
smoking.	reaches explosives.	the competent authority to specify local/regional/	national/international regulations (to be specified).		
P230		national/international	Manufacturer/supplier or the		
Keep wetted with		regulations as applicable.	competent authority to specify		
- for substances and mixtures which are			whether disposal requirements apply		
wetted, diluted, dissolved or suspended with a			to contents, container or both.		
phlegmatizer in order to reduce or suppress					
their explosive properties (desensitized					
explosives).					
Manufacturer/supplier or the competent					
authority to specify appropriate material.					
P234					
Keep only in original packaging.					
P240					
Ground and bond container and receiving					
equipment					
- if the explosive is electrostatically sensitive.					
P250					
Do not subject to grinding/shock/friction/					
- if the explosive is mechanically sensitive.					
Manufacturer/supplier or the competent					
authority to specify applicable rough handling.					
P280					

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Wear protective gloves/protective		
clothing/eye protection/face protection.		
Manufacturer/supplier or the competent		
authority to specify the appropriate type of		
equipment.		

FLAMMABLE LIQUIDS

(Chapter 2.6)

Hazard statement

Symbol	
Flame	

1	Dangar	H224	Extramaly flamma	phla liquid and vanour	.
1	Danger		Extremely flammable liquid and vapour		3KL
2	Danger	H225	Highly flammable	liquid and vapour	マ ブ
3	Warning	H226	Flammable liquid	and vapour	
		Precautio	onary statements		
Pre	evention	Resp	onse	Storage	Disposal
atmosphere. P240 Ground and bond containequipment - if the liquid is volatile as explosive atmosphere. P241 Use explosion-proof [electing times at the liquid is volatile as explosive atmosphere if the liquid is volatile as explosive atmosphere may be omitted where les introduces more specification to square brackets in square brackets in square brackets.	losed. In and may generate an explosive iner and receiving and may generate an ctrical/ventilating/ and may generate and ocal or national legislation oc provisions. may be used to specify specific ighting or other equipment if	P303 + P361 + P353 IF ON SKIN (or hai immediately all cont Rinse skin with wate text in square brack where the manufactu competent authority appropriate for the sp P370 + P378 In case of fire: Use. if water increases Manufacturer/supp competent authority that appropriate media.	aminated clothing. er [or shower]. ets to be included ver/supplier or the consider it vecific chemical. to extinguish. erisk. lier or the	P403 + P235 Store in a wellventilated place. Keep cool for flammable liquids Category 1 and other flammable liquids that are volatile and may generate an explosive atmosphere.	P501 Dispose of contents/container to in accordance with local/regional/national/internationa l regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.
P242 Use non-sparking tools.					

Hazard category

Signal word

- if the liquid is volatile and may generate an explosive atmosphere and if the minimum ignition energy is very low. (This applies to substances and mixtures

r	T		
12	where the minimum ignition energy is <0.1 mJ, e.g.		
	carbon disulfide).		
	P243		
	Take action to prevent static discharges.		
	- if the liquid is volatile and may generate an explosive		
	atmosphere.		
	- may be omitted where local or national legislation		
	introduces more specific provisions.		
	P280		
	Wear protective gloves/protective clothing/eye		
	protection/face protection.		
	Manufacturer/supplier or the competent authority to		
	specify the appropriate type of equipment.		

FLAMMABLE LIQUIDS

(Chapter 2.6)

Symbol
No symbol

Hazard category Signal word Hazard statement

4 Warning H227 Combustible liquid

Precautionary statements			
Prevention	Response	Storage	Disposal
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P378 In case of fire: Use to extinguish. - if water increases risk. Manufacturer/supplier or the competent authority to specify appropriate media.	P403 Store in a well-ventilated place for flammable liquids Category 1 and other flammable liquids that are volatile and may generate an explosive atmosphere.	P501 Dispose of contents/container to in accordance with local/regional/ national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

FLAMMABLE SOLIDS

(Chapter 2.7)

Symbol Flame



Hazard category Signal word Hazard statement

Danger H228 Flammable solid
Warning H228 Flammable solid

Precautionary statements			
Prevention	Response	Storage	Disposal
P210	P370 + P378		
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No	In case of fire: Use to extinguish - if water increases risk.		
smoking.	Manufacturer/supplier or the competent authority to specify appropriate media.		
P240			
Ground and bond container and receiving equipment.			
- if the solid is electrostatically sensitive.			
P241			
Use explosion-proof [electrical/ventilating/lighting/]equipment.			
-			
- if dust clouds can occur.			
- may be omitted where local or national			
legislation introduces more specific			
provisions.			
- text in square brackets may be used to			
specify specific electrical, ventilating, lighting			
or other equipment if necessary and as			
appropriate.P280			
Wear protective gloves/protective			
clothing/eye protection/face protection.			
Manufacturer/supplier or the competent			
authority to specify the appropriate type of			
equipment.			

SELF-REACTIVE SUBSTANCES AND MIXTURES (Chapter 2.8)

Symbol Exploding bomb

Hazard category Signal word Hazard statement

Type A Danger H240 Heating may cause an explosion



	Precautionary statements				
Prevention	Response	Storage	Disposal		
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 Keep only in original packaging. P235 Keep cool may be omitted if P411 is given on the label. P240 Ground and bond container and receiving equipment if electrostatically sensitive and able to generate an explosive atmosphere. P280 Wear protective gloves/protective clothing/eye protection/face protection Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P372 + P380 + P373 In case of fire: Explosion risk. Evacuate area. Do NOT fight fire when fire reaches explosives.	P403 Store in a well-ventilated place except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place. P411 Store at temperatures not exceeding °C/ °F if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 Store separately.	Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.		

SELF-REACTIVE SUBSTANCES AND MIXTURES (Chapter 2.8)

Hazard category Signal word Hazard statement

Type B Danger Heating may cause a fire or explosion H241

Symbol Exploding bomb and flame





Precautionary statements			
Prevention	Response	Storage	Disposal
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 Keep only in original packaging. P235 Keep cool. - may be omitted if P411 is given on the label P240 Ground and bond container and receiving equipment. - if electrostatically sensitive and able to generate an explosive atmosphere. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P380 + P375 [+ P378] In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. [Use to extinguish.] - text in square brackets to be used if water increases riskManufacturer/supplier or the competent authority to specify appropriate media.	P403 Store in a well-ventilated place except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place. P411 Store at temperatures not exceeding°C/°F if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 Store separately.	Dispose of contents/container toin accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents. container or both.

SELF-REACTIVE SUBSTANCES AND MIXTURES (Chapter 2.8)

Symbol	
Flame	

Hazard category	Signal word	Hazard s	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



PYROPHORIC LIQUIDS

(Chapter 2.9)

Symbol Flame

Hazard category Signal word Hazard statement

Danger Catches fire spontaneously if exposed to air 1



Precautionary statements			
Prevention	Response	Storage	Disposal
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	P302 + P334 IF ON SKIN: Immerse in cool water or wrap with wet bandages		
P222 Do not allow contact with air. - if emphasis of the hazard statement is deemed necessary. P231+P232 Handle and store contents under inert gas/ Protect from moisture. Manufacturer/supplier or the competent authority to specify appropriate liquid or gas if "inert gas" is not appropriate. P233 Keep container tightly closed.	P370 + P378 In case of fire: Use to extinguish - if water increases risk Manufacturer/supplier or the competent authority to specify appropriate media.		
P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.			

Flame

Symbol

Hazard category

Signal word

Hazard statement

Danger

H250

PYROPHORIC SOLIDS (Chapter 2.10)

Catches fire spontaneously if exposed to air

	1	
T'T	W.	

Precautionary statements			
Prevention	Response	Storage	Disposal
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	P302 + P335 + P334 IF ON SKIN: Brush off loose particles from skin. Immerse in cool water or wrap in wet bandages.		
P222 Do not allow contact with air. - if emphasis of the hazard statement is deemed necessary. P231 + P232 Handle and store contents under inert gas/ Protect from moisture. Manufacturer/supplier or the competent authority to specify appropriate liquid or gas if "inert gas" is not appropriate. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P378 In case of fire: Use to extinguish - if water increases risk Manufacturer/supplier or the competent authority to specify appropriate media.		

SELF-HEATING SUBSTANCES AND MIXTURES (Chapter 2.11)

Symbol Flame

Hazard category	Signal word	Hazard statement
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Danger H251 Self-heating; may catch fire

Warning H252 Self-heating in large quantities; may catch fire



Precautionary statements			
Prevention	Response	Storage	Disposal
P235 Keep cool. - may be omitted if P413 is given on the label P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.		P407 Maintain air gap between stacks or pallets. P410 Protect from sunlight. P413 Store bulk masses greater than kg/lbs at temperatures not exceeding°C/°F Manufacturer/supplier or the competent authority to specify mass and temperature using applicable scale. P420 Store separately.	

SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES (Chapter 2.12)

Symbol	
Flame	

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	
P223 Do not allow contact with water. - if emphasis of the hazard statement is deemed necessary. P231 + P232 Handle and store contents under inert gas/ Protect from moisture. - if the substance or mixture reacts readily with moisture in air. Manufacturer/supplier or the competent authority to specify appropriate liquid or gas if "inert gas" is not appropriate.P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P302 + P335 + P334 IF ON SKIN: Brush off loose particles from skin. Immerse in cool water. P370 + P378 In case of fire: Use to extinguish - if water increases risk. Manufacturer/supplier or the competent authority to specify appropriate media.	P402 + P404 Store in a dry place. Store in a closed container.	Dispose of contents/container toin accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES (Chapter 2.12)

Symbol Flame

Hazard category Signal word Hazard statement

Warning H261 In contact with water releases flammable gas



Precautionary statements				
Prevention	Response	Storage	Disposal	
P231 + P232 Handle and store contents under inert gas/ Protect from moisture. - if the substance or mixture reacts readily with moisture in air. Manufacturer/supplier or the competent authority to specify appropriate liquid or gas if "inert gas" is not appropriate. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P378 In case of fire: Use to extinguish. - if water increases risk. Manufacturer/supplier or the competent authority to specify appropriate media.	P402 + P404 Store in a dry place. Store in a closed container.	P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

OXIDIZING LIQUIDS

(Chapter 2.13)

Symbol Flame over circle

Hazard category

Signal word

Danger

Hazard statement

H271 May cause fire or explosion; strong oxidizer



Precautionary statements				
Prevention	Response	Storage	Disposal	
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment. P283 Wear fire resistant or flame retardant clothing.	P306 + P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. P370 + P378 In case of fire: Use to extinguish. - if water increases risk. Manufacturer/supplier or the competent authority to specify appropriate media.	P420 Store separately.	Dispose of contents/container toin accordance with local/regional/ national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

OXIDIZING LIQUIDS

(Chapter 2.13)

Symbol Flame over circle



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

Precautionary statements				
Prevention	Response	Storage	Disposal	
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P378 In case of fire: Use to extinguish if water increases risk Manufacturer/supplier or the competent authority to specify appropriate media.		P501 Dispose of contents/container toin accordance with local/regional/ national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

OXIDIZING SOLIDS

(Chapter 2.14)

Symbol Flame over circle

Hazard category

Signal word

Hazard statement

1

Danger

H271 May cause fire or explosion; strong oxidizer



Precautionary statements				
Prevention	Response	Storage	Disposal	
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment. P283 Wear fire resistant or flame retardant clothing.	P306 + P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. P370 + P378 In case of fire: Use to extinguish. - if water increases risk. Manufacturer/supplier or the competent authority to specify appropriate media.	P420 Store separately.	Dispose of contents/container toin accordance with local/regional/ national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

OXIDIZING SOLIDS (Chapter 2.14)

Symbol Flame over circle

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

Warning H272 May intensify fire; oxidizer



	Precautionary statements				
Prevention	Response	Storage	Disposal		
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials.	P370 + P378 In case of fire: Use to extinguish if water increases risk Manufacturer/supplier or the competent authority to specify appropriate media.		P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents,		
P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.			container or both.		

ORGANIC PEROXIDES

(Chapter 2.15)

Symbol Exploding bomb

Hazard category Signal word Hazard statement

Type A Danger H240 Heating may cause an explosion



	Precautionary statements			
Prevention	Response	Storage	Disposal	
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 Keep only in original packaging. P235 Keep cool. - may be omitted if P411 is given on the label P240 Ground and bond container and receiving equipment. - if electrostatically sensitive and able to generate an explosive atmosphere. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P372 + P380 + P373 In case of fire: Explosion risk. Evacuate area. Do NOT fight fire when fire reaches explosives	P403 Store in a well-ventilated place. - except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place. P411 Store at temperatures not exceeding°C/°F. - if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary. Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P410 Protect from sunlight.	P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	
		P420 Store separately.		

ORGANIC PEROXIDES

(Chapter 2.15)

Symbol Exploding bomb and flame

Hazard category Signal word Hazard statement

Type B Danger H241 Heating may cause a fire or explosion





	Precautionary statements				
Prevention	Response	Storage	Disposal		
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 Keep only in original packaging. P235	P370 + P378 In case of fire: Use to extinguish Manufacturer/supplier or the competent authority to specify appropriate media. — if water increases risk. P370+P380+P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.	P403 Store in a well-ventilated place. - except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place. P411 Store at temperatures not exceeding °C/ °F if	P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.		
Keep cool. - may be omitted if P411 is given on the label P240 Ground and bond container and receiving equipment. - if electrostatically sensitive and able to generate an explosive atmosphere. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P370 + P380 + P375 [+ P378] In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. [Use to extinguish.] - text in square brackets to be used if water increases risk. Manufacturer/supplier or the competent authority to specify appropriate media.	temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary. Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale.P410 Protect from sunlight. P420 Store separately.			

ORGANIC PEROXIDES

(Chapter 2.15)

Symbol	
Flame	

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
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	P370 + P378 In case of fire: Use to extinguish - if water increases risk Manufacturer/supplier or the competent authority to specify appropriate media.	P403 Store in a well-ventilated place except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place. P411	P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent
P234 Keep only in original packaging.		Store at temperatures not exceeding°C/°F if temperature control is	authority to specify whether disposal requirements apply to contents,
P235 Keep cool. - may be omitted if P411 is given on the label.		required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary.	container or both.
P240 Ground and bond container and receiving equipment if electrostatically sensitive and able to generate an explosive atmosphere.		Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P410 Protect from sunlight.	
P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.		P420 Store separately.	

$\ \, \textbf{ACUTE TOXICITY - DERMAL} \\$

(Chapter 3.1)

Symbol Skull and crossbones

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

Danger H310 Fatal in contact with skin



Precautionary statements			
Prevention	Response	Storage	Disposal
P262 Do not get in eyes, on skin, or on clothing. P264 Wash thoroughly after handling Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 IF ON SKIN: Wash with plenty of water/Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P310 Immediately call a POISON CENTER/doctor/Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see on this label) - if immediate measures such as specific cleansing agent is advised Reference to supplemental first aid instruction. P361+ P364 Take off immediately all contaminated clothing and wash it before reuse.	P405 Store locked up.	Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

ACUTE TOXICITY - DERMAL (Chapter 3.1)

Symbol Skull and crossbones

Hazard category Signal word Hazard statement

Danger H311 Toxic in contact with skin



Precautionary statements			
Prevention	Response	Storage	Disposal
P280 Wear protective gloves/protective clothing. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 IF ON SKIN: Wash with plenty of water/Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P312 Call a POISON CENTER/doctor//if you feel unwellManufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see on this label) - if immediate measures such as specific cleansing agent is advised Reference to supplemental first aid instruction. P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.	P405 Store locked up.	Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

ACUTE TOXICITY - DERMAL (Chapter 3.1)

Symbol Exclamation mark

Hazard category Signal word Hazard statement

4 Warning H312 Harmful in contact with skin



Precautionary statements			
Prevention	Response	Storage	Disposal
Wear protective gloves/protective clothing Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 IF ON SKIN: Wash with plenty of water/Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P312 Call a POISON CENTER/doctor//if you feel unwellManufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see on this label) - if immediate measures such as specific cleansing agent is advised Reference to supplemental first aid instruction. P362 + P364 Take off contaminated clothing and wash it before reuse.		Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

SKIN CORROSION/IRRITATION

Hazard statement

(Chapter 3.2)

Symbol Corrosion

Hazard category Signal word

1A to 1C Danger H314 Causes severe skin burns and eye damage



Precautionary statements			
Prevention	Response	Storage	Disposal
P260 Do not breathe dusts or mists if inhalable particles of dusts or mists may occur during use. P264 Washthoroughly after handlingManufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. - text in square brackets to be included where the manufacturer/supplier or the competent authority consider it appropriate for the specific chemical. P363 Wash contaminated clothing before reuse. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310 Immediately call a POISON CENTER/doctor/Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 Specific treatment (see on this label) Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate Reference to supplemental first aid instruction. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	P405 Store locked up.	P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

SKIN CORROSION/IRRITATION

(Chapter 3.2)

Symbol Exclamation mark

Hazard category

Signal word

Hazard statement

2

Warning

H315 Causes skin irritation



Precautionary statements			
Prevention	Response	Storage	Disposal
P264 Wash thoroughly after handling Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P280 Wear protective gloves. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 IF ON SKIN: Wash with plenty water/Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P321 Specific treatment (see on this label) Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate Reference to supplemental first aid instruction. P332 + P313 If skin irritation occurs: Get medical advice. — may be omitted when P333+P313 is given on the label P362 + P364 Take off contaminated clothing and wash it before reuse.		

1

EYE DAMAGE/IRRITATION

(Chapter 3.3)

Symbol Corrosion

Hazard category Signal word Hazard statement

Danger H318 Causes serious eye damage



Precautionary statements			
Prevention	Response	Storage	Disposal
P280 Wear eye protection/face protection. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor/ Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.		

EYE DAMAGE/IRRITATION

(Chapter 3.3)

Symbol Exclamation mark

Hazard category Signal word Hazard statement

2A Warning H319 Causes serious eye irritation



Precautionary statements			
Prevention	Response	Storage	Disposal
P264 Wash thoroughly after handling Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P280 Wear eye protection/face protection. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice.		

SENSITIZATION - SKIN (Chapter 3.4)

Symbol Exclamation mark

Hazard category Signal word Hazard statement

1, 1A, 1B Warning H317 May cause an allergic skin reaction



Precautionary statements			
Prevention	Response	Storage	Disposal
P261 Avoid breathing dust/fume/gas/mist/ vapours/spray. — may be omitted if P260 is given on the label Manufacturer/supplier or the competent authority to specify applicable conditions. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 IF ON SKIN: Wash with plenty of water/Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P333 + P313 If skin irritation or rash occurs: Get medical advice. P321 Specific treatment (see on this label) Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate Reference to supplemental first aid instruction. P362 + P364 Take off contaminated clothing and wash it before reuse.		Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

GERM CELL MUTAGENICITY (Chapter 3.5)

Symbol Health hazard

Hazard category	Signal word	1. Hazard statement	
1	Danger	H340	May cause genetic defects <>
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	
P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P308 + P313 IF exposed or concerned: Get medical advice.	P405 Store locked up.	P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

CARCINOGENICITY (Chapter 3.6)

Symbol Health hazard

Hazard category	Signal word	Hazard statement		
1	Danger	H350	May cause cancer <>	

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	
P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P308 + P313 IF exposed or concerned: Get medical advice.	P405 Store locked up.	P501 Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

TOXIC TO REPRODUCTION

(**Chapter 3.7**)

Symbol Health hazard

Hazard category	Signal word	Hazard statement	
1	Danger	H360 May damage fertility or the unborn child <> <<>>	
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	
P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. Manufacturer/supplier or the competent authority to specify the appropriate type of equipment.	P308 + P313 IF exposed or concerned: Get medical advice.	P405 Store locked up.	Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	