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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
(Fourth session, 9-11 December 2002
agenda item 2)

**GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION
AND LABELLING OF CHEMICALS (GHS)**

Submitted by the GHS Editorial Group

Annex 1










ALLOCATION OF LABEL ELEMENTS



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ANNEX 1



Allocation of label elements









- A1.1 For the GHS, the assigned pictogram, signal word and hazard statement are given in that order for each hazard category of the hazard class. Where the hazard class and or categories are covered under the *UN Recommendations on the Transport of Dangerous Goods, Model Regulations*, the assigned corresponding pictogram is given for each category below the GHS requirements.







EXPLOSIVES					
Unstable/ Division 1.1	Division 1.2	Division 1.3	Division 1.4	Division 1.5	Division 1.6
 Danger Explosive; mass explosion hazard	 Danger Explosive; severe projection hazard	 Danger Explosive; fire, blast or projection hazard	1.4 * Warning Fire or projection hazard	1.5 * Warning May explode in fire	1.6 *
* Apply only to substances or mixtures subject to <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , requirements (see also par. 1.4.10.5.1 (d) (ii))					
					
Notes on colours of <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i>, pictogram elements: (1) For Divisions 1.1, 1.2 and 1.3: Symbol exploding bomb: black; background: orange; figure "1" in bottom corner. (2) For Divisions 1.4, 1.5, 1.6: Background: orange; Figures: black; figure "1" in bottom corner.					





FLAMMABLE GASES				
Category 1	Category 2	-	-	Note
 Danger Extremely flammable gas	No symbol Warning Flammable gas			Under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i>, the symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases.
 2	Not required under the <i>UN Model Regulations</i>			










FLAMMABLE AEROSOLS				
Category 1	Category 2	-	-	Note
 Danger Extremely flammable aerosol	 Warning Flammable aerosol			Under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i>, the symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases.
 2	 2			



OXIDIZING GASES				
Category 1	-	-	-	Note
 Danger May cause or intensify fire; oxidizer				
 5.1				Pictogram colours: Symbol and number: black. Background: yellow.



GASES UNDER PRESSURE				
Compressed gas	Liquefied gas	Refrigerated liquefied gas	Dissolved gas	Note Under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , pictogram elements:
 Warning Contains gas under pressure; may explode if heated	 Warning Contains gas under pressure; may explode if heated	 Warning Contains refrigerated gas; may cause cryogenic burns or injury	 Warning Contains gas under pressure; may explode if heated	(1) Not required for toxic or flammable gases. (2) The symbol, number and border line may be shown in white instead of black. The background stays green in both cases.
 2	 2	 2	 2	





FLAMMABLE LIQUIDS				
Category 1	Category 2	Category 3	Category 4	Note
 Danger Extremely flammable liquid and vapour	 Danger Highly flammable liquid and vapour	 Warning Flammable liquid and vapour	No symbol Warning Combustible liquid	Under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , the symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases.
			Not required under the <i>UN Recommendations on the Transport of Dangerous Goods Model Regulations</i>	







FLAMMABLE SOLIDS				
Category 1	Category 2	-	-	Note
 Danger Flammable solid	 Warning Flammable solid			Colours for pictogram under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> : Symbol and figure: black. Background: white with seven vertical red stripes.
				







SELF-REACTIVE SUBSTANCES				
Type A	Type B	Types C and D	Types E and F	Type G
 Danger Heating may cause an explosion	  Danger Heating may cause a fire or explosion	 Danger Heating may cause a fire	 Warning Heating may cause a fire	No label elements are allocated for this category
Same as for explosives (follow same symbol selection process)	 			Not required under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations
Notes: (1) For Type B, under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of UN Model Regulations for more details). (2) For colours of UN Model Regulations pictograms see descriptions for Flammable Solids and Explosives.				







PYROPHORIC LIQUIDS				
Category 1  Danger Catches fire spontaneously if exposed to air 	-	-	-	Note Colours of <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , pictogram: Symbol and figure: black. Background: upper half: white; lower half: red.










PYROPHORIC SOLIDS				
Category 1  Danger Catches fire spontaneously if exposed to air 	-	-	-	Note Colours of <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , pictogram: Symbol and figure: black. Background: upper half: white; lower half: red.



SELF-HEATING SUBSTANCES				
<p>Category 1</p>  <p>Danger</p> <p>Self-heating; may catch fire</p> 	<p>Category 2</p>  <p>Warning</p> <p>Self-heating in large quantities; may catch fire</p> 	-	-	<p>Note</p> <p>Colours of <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i>, pictogram:</p> <p>Symbol and figure: black.</p> <p>Background: upper half: white; lower half: red.</p>








SUBSTANCES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES				
Category 1  Danger In contact with water releases flammable gases which may ignite spontaneously 	Category 2  Danger In contact with water releases flammable gases 	Category 3  Warning In contact with water releases flammable gases 	-	Note Under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , the symbol, number and border line may be shown in black instead of white. The background stays blue in both cases.








OXIDIZING LIQUIDS				
Category 1  Danger May cause fire or explosion; strong oxidizer 	Category 2  Danger May intensify fire; oxidizer 	Category 3  Warning May intensify fire; oxidizer 	-	Note Under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , pictogram colours: Symbol and number: black. Background: yellow.








OXIDIZING SOLIDS				
<p>Category 1</p>  <p>Danger</p> <p>May cause fire or explosion; strong oxidizer</p> 	<p>Category 2</p>  <p>Danger</p> <p>May intensify fire; oxidizer</p> 	<p>Category 3</p>  <p>Warning</p> <p>May intensify fire; oxidizer</p> 	-	<p>Note</p> <p><i>Under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, pictogram colours: Symbol and number: black. Background: yellow.</i></p>








ORGANIC PEROXIDES				
Type A	Type B	Types C and D	Types E and F	Type G
 Danger Heating may cause An explosion	  Danger Heating may cause a fire or explosion	 Danger Heating may cause a fire	 Warning Heating may cause a fire	There are no label elements allocated to this hazard class.
Same as for explosives (follow same symbol selection process)	 			Not required under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations.</i>
Notes: (1) For Type B, under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of UN Model Regulations for more details). (2) UN Model Regulations pictogram colours: See tables for Oxidizing liquids and Explosives.				



CORROSIVE TO METALS				
Category 1  Warning May be corrosive to metals 	-	-	-	Note Under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> , pictogram colours: Symbol: black background: upper half: white; lower half: black with white border; Figure 8: white.


ACUTE TOXICITY: ORAL				
Category 1	Category 2	Category 3	Category 4	Category 5
 Danger Fatal if swallowed	 Danger Fatal if swallowed	 Danger Toxic if swallowed	 Warning Harmful if swallowed	No symbol Warning May be harmful if swallowed
			Not required the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i> Note: For gases and aerosols under the UN Model Regulations, replace the number 6 in the bottom corner of the pictogram by 2. UN Model Regulations pictogram colours: Symbol and figure: black. Background: white.	

ACUTE TOXICITY: SKIN				
Category 1	Category 2	Category 3	Category 4	Category 5
 Danger Fatal in contact with skin	 Danger Fatal in contact with skin	 Danger Toxic in contact with skin	 Warning Harmful in contact with skin	 No symbol Warning May be harmful in contact with skin
			Not required under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i>. Note: For gases and aerosols under the UN Model Regulations, replace the number 6 in the bottom corner of the pictogram by 2. For UN Model Regulations pictogram colours: Symbol and figure: black. Background: white.	

ACUTE TOXICITY: INHALATION				
Category 1	Category 2	Category 3	Category 4	Category 5
 <p>Danger Fatal if inhaled</p>	 <p>Danger Fatal if inhaled</p>	 <p>Danger Toxic if inhaled</p>	 <p>Warning Harmful if inhaled</p>	<p>No symbol Warning May be harmful if inhaled</p>
			<p>Not required under the <i>UN recommendations on the Transport of Dangerous Goods, Model Regulations</i>. Note: For gases and aerosols under the UN Model Regulations, replace the number 6 in the bottom corner of the pictogram by 2. For UN Model Regulations pictogram colours: Symbol and figure: black. Background: white.</p>	


SKIN CORROSION/IRRITATION				
Category 1A	Category 1B	Category 1C	Category 2	Category 3
 <p>Danger Causes severe skin burns and eye damage</p>	 <p>Danger Causes severe skin burns and eye damage</p>	 <p>Danger Causes severe skin burns and eye damage</p>	 <p>Warning Causes skin irritation</p>	<p>No symbol Warning Causes mild skin irritation</p>
			<p>Not required under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</i>. Note: UN Model Regulations pictogram colours: Symbol: black background: upper half: white; lower half: black with white border; Figure 8: white.</p>	

SERIOUS EYE DAMAGE/ EYE IRRITATION				
Category 1  Danger Causes serious eye damage	Category 2A  Warning Causes serious eye irritation	Category 2B No symbol Warning Causes eye irritation	-	-
Not required under the UN <i>Recommendations on the Transport of Dangerous Goods, Model Regulations.</i>				




RESPIRATORY SENSITIZATION *				
Category 1	-	-	-	-
<div><p>Danger</p><p>May cause allergy or asthma symptoms or breathing difficulties if inhaled</p></div>				
<p>Not required under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations.</i></p>				




*




Further work is included in the work programme of the Sub-Committee of Experts on the GHS.



SKIN SENSITIZATION*				
Category 1	-	-	-	-
<div><p>Warning</p><p>May cause an allergic skin reaction</p></div>				
Not required under the UN <i>Recommendations on the Transport of Dangerous Goods, Model Regulations.</i>				



* *Further work is included in the work programme of the Sub-Committee of Experts on the GHS.*


GERM CELL MUTAGENICITY				
Category 1A	Category 1B	Category 2	-	-
 <p>Danger</p> <p>May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	 <p>Danger</p> <p>May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	 <p>Warning</p> <p>Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>		
Not required under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations.</i>				



CARCINOGENICITY				
Category 1A	Category 1B	Category 2	-	-
 <p>Danger</p> <p>May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	 <p>Danger</p> <p>May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	 <p>Warning</p> <p>Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>		
Not required under the <i>UN Recommendations on the Transport of Dangerous Goods, Model Regulations.</i>				

TOXIC TO REPRODUCTION				
Category 1A	Category 1B	Category 2	Additional Category	-
 <p>Danger</p> <p>May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	 <p>Danger</p> <p>May damage fertility or the unborn child (state specific effect if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	 <p>Warning</p> <p>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)</p>	<p>Effects on or via lactation</p> <p>May cause harm to breast-fed children.</p>	
<p>Not required under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations.</p>				

TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)				
Category 1	Category 2	-	-	-
 <p>Danger</p> <p>Causes damage to (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) if (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	 <p>Warning</p> <p>May cause damage to (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) if (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>			
Not required under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations.				

TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)				
Category 1	Category 2	-	-	-
 <p>Danger</p> <p><i>Causes (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) damage through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</i></p>	 <p>Warning</p> <p><i>May cause (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) damage through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</i></p>			
<p align="center">Not required under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations.</p>				

AQUATIC TOXICITY (ACUTE)				
Category 1	Category 2	Category 3	-	Note
 <p>Warning</p> <p>Very toxic to aquatic life</p>	<p>No symbol</p> <p>No signal word</p> <p>Toxic to aquatic life</p>	<p>No symbol</p> <p>No signal word</p> <p>Harmful to aquatic life</p>		<p>Presently not covered under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations if the substance presents any other hazards covered by UN Model Regulations . If no other hazard is presented, the UN Model Regulations Class 9 label is applicable. The UN Model Regulations requirements are being revised.</p>

AQUATIC TOXICITY (CHRONIC)				
Category 1	Category 2	Category 3	Category 4	Note
 <p>Warning</p> <p>Very toxic to aquatic life with long lasting effects</p>	 <p>No signal word</p> <p>Toxic to aquatic life with long lasting effects</p>	<p>No symbol</p> <p>No signal word</p> <p>Harmful to aquatic life with long lasting effects</p>	<p>No symbol</p> <p>No signal word</p> <p>May cause long lasting harmful effects to aquatic life</p>	<p>Presently not covered under the UN Recommendations on the Transport of Dangerous Goods , Model Regulations if the substance presents any other hazards covered by UN Model Regulations . If no other hazard is presented, UN Model Regulations Class 9 label is applicable. The UN Model Regulations requirements are being revised.</p>