

# UN/SCEGHS/4/INF.8

## UN/SCEGHS/3/INF.5/Add.6-Rev1

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Sub-Committee of Experts on the Globally  
Harmonized System of Classification  
and Labelling of Chemicals  
(Third session, 10-12 July 2002)

### DRAFT GHS /MASTER/Annex 1

*Note by the secretariat:*

*This document contains Annex 1 of the draft GHS with, in a visible mode, all amendments incorporated after the 3rd session of the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (July 2002). The corresponding consolidated document is submitted under reference SG/ST/AC.10/C.4/2002/16/Add.4 to the fourth session of the Sub-Committee.*

ANNEX 1

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**ANNEX 21**










**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 (TDG/MR)*, 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
			1.4 *  Warning  Fire or projection hazard	1.5 *  Warning  May explode in fire	1.6 *
<b>Danger</b>  Explosive; mass explosion hazard	<b>Danger</b>  Explosive; severe projection hazard	<b>Danger</b>  Explosive; fire, blast or projection hazard	* Apply to substances or mixtures subject to UN TDG/MR Recommendations on the Transport of Dangerous Goods, Model Regulations, requirements only (see also par. 41.1.4.10.5.1 (d) (ii))		
					
<b>Notes on colours of TDG- UN Recommendations on the Transport of Dangerous Goods, Model Regulations, pictogram elements:</b>					
(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
 <b>Danger</b> Extremely flammable gas	No symbol  Warning  Flammable gas			Under the <del>TDG/MR</del> <b>UN</b> Recommendations on the Transport of Dangerous Goods, Model Regulations, 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 <del>TDG/MR</del> <b>UN</b> Model Regulations			

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










OXIDIZING GASES				
Category 1	-	-	-	Notes
 <p><b>Danger</b> May cause or intensify fire; oxidizer</p>				
				<b>Pictogram colours:</b> Symbol and number: black. Background: yellow.



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



FLAMMABLE LIQUIDS				
Category 1	Category 2	Category 3	Category 4	
 <p><b>Danger</b> Extremely flammable liquid and vapour</p>	 <p><b>Danger</b> Highly flammable liquid and vapour</p>	 <p><b>Warning</b> Flammable liquid and vapour</p>	<p>No symbol</p> <p><b>Warning</b> Combustible liquid</p>	<p><u>Note on TDG/MRUN Recommendations on the Transport of Dangerous Goods, Model Regulations, pictogram</u> The symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases.</p>
			<p><b>NOT REQUIRED UNDER THE TDG/MRUN Recommendations on the Transport of Dangerous Goods Model Regulations</b></p>	





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















SELF-REACTIVE SUBSTANCES				
Type A	Type B	Types C and D	Types E and F	Type G
 <b>Danger</b> Heating may cause an explosion	  <b>Danger</b> Heating may cause a fire or explosion	 <b>Danger</b> Heating may cause a fire	 <b>Warning</b> 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 <b>TDG/MR UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b>
<b>Notes:</b> (1) For Type B, under <b>TDG/MR UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b> , special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of <b>UN Model Regulations RTDG</b> for more details). (2) For colours of <b>UN Model Regulations TDG</b> pictograms see descriptions for Flammable Solids and Explosives.				







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










PYROPHORIC SOLIDS				
<p>Category 1</p>  <p><b>Danger</b></p> <p>Catches fire spontaneously if exposed to air</p> 	-	-	-	<p>Note</p> <p><u>Colours of UN Recommendations on the Transport of Dangerous Goods, Model Regulations, TDG pictogram: See table for pyrophoric liquids.</u>                      Symbol and Figure: black.                      Background: upper half: white; lower half: red.</p>


SELF-HEATING SUBSTANCES				
<b>Category 1</b>  <b>Danger</b> Self-heating; may catch fire 	<b>Category 2</b>  <b>Warning</b> Self-heating in large quantities; may catch fire 	-	-	<b>Note</b> <u>Colours of TDG UN Recommendations on the Transport of Dangerous Goods, Model Regulations, pictogram:</u> See table for pyrophoric liquids. Symbol and Figure: black. Background: upper half: white; lower half: red.

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








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








OXIDIZING SOLIDS				
<b>Category 1</b>  <b>Danger</b> May cause fire or explosion; strong oxidizer 	<b>Category 2</b>  <b>Danger</b> May intensify fire; oxidizer 	<b>Category 3</b>  <b>Warning</b> May intensify fire; oxidizer 	-	<b>Note</b> <a href="#">UN Recommendations on the Transport of Dangerous Goods, Model Regulations, TDG Pictogram colours:</a> <b>Symbol and number: black. Background: yellow. See table above on Oxidizing liquids.</b>

ORGANIC PEROXIDES				
Type A	Type B	Types C and D	Types E and F	Type G
 <b>Danger</b> Heating may cause An explosion	  <b>Danger</b> Heating may cause a fire or explosion	 <b>Danger</b> Heating may cause a fire	 <b>Warning</b> 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 UN Recommendations on the Transport of Dangerous Goods, Model Regulations <b>TDG/</b> <b>MR</b>
<b>Notes:</b> (1) For Type B, under <b>UN Recommendations on the Transport of Dangerous Goods, Model Regulations <b>TDG/MR</b></b> , special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of <b>UN Model Regulations <b>RTDG</b></b> for more details). (2) <b>UN Model Regulations <b>TDG</b></b> Pictogram colours: See tables for Oxidizing liquids and Explosives.				








CORROSIVE TO METALS				
Category 1	-	-	-	Note
 <b>Warning</b> May be corrosive to metals				<b>UN                      Recommendations                      on the Transport of                      Dangerous Goods,                      Model Regulations,  <b>TDG pictogram                      colours:</b>                      Symbol: black                      background: upper</b>





				<p>half: white; lower half: black with white border; Figure 8: white.</p>
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ACUTE TOXICITY: ORAL				
Category 1	Category 2	Category 3	Category 4	Category 5
 <p><b>Danger</b> Fatal if swallowed</p>	 <p><b>Danger</b> Fatal if swallowed</p>	 <p><b>Danger</b> Toxic if swallowed</p>	 <p><b>Warning</b> Harmful if swallowed</p>	<p>No symbol</p> <p><b>Warning</b> May be harmful if swallowed</p>
			<p>NOT REQUIRED UNDER THE <b>UN Recommendations Model Regulations on the Transport of Dangerous Goods, DGM Model Regulations R</b></p> <p>Notes: For gases and aerosols under the <b>UN Model Regulations TDG/MR</b>, replace the number 6 in the bottom corner of the pictogram by 2. <b>UN Model Regulations TDG</b> pictogram colours: Symbol and figure: black. Background: white.</p>	

ACUTE TOXICITY: <del>SKIN</del> DERMAL				
Category 1	Category 2	Category 3	Category 4	Category 5
 <b>Danger</b> Fatal in contact with skin	 <b>Danger</b> Fatal in contact with skin	 <b>Danger</b> Toxic in contact with skin	 <b>Warning</b> Harmful in contact with skin	No symbol  Warning May be harmful in contact with skin
			NOT REQUIRED UNDER THE <b>UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b> <del>TDG/MR</del> Notes: For gases and aerosols under the <b>UN Model Regulations</b> <del>TDG/MR</del> , replace the number 6 in the bottom corner of the pictogram by 2. For <b>UN Model Regulations</b> <del>TDG</del> pictogram colours: see table above on acute toxicity-oral. Symbol and figure: black. Background: white.	



ACUTE TOXICITY: INHALATION				
Category 1	Category 2	Category 3	Category 4	Category 5
 <p><b>Danger</b> Fatal if inhaled</p>	 <p><b>Danger</b> Fatal if inhaled</p>	 <p><b>Danger</b> Toxic if inhaled</p>	 <p><b>Warning</b> Harmful if inhaled</p>	<p><b>No symbol</b></p> <p><b>Warning</b> May be harmful if inhaled</p>
			<p><b>NOT REQUIRED UNDER THE UN recommendations on the Transport of Dangerous Goods, Model Regulations TDG/MR</b></p> <p><b>Notes:</b> For gases and aerosols under the UN Model Regulations<sup>TDG/MR</sup>, replace the number 6 in the bottom corner of the pictogram by 2. For UN Model Regulations<sup>TDG</sup> pictogram colours: see table above on acute toxicity-oral. Symbol and figure: black. Background: white.</p>	

SKIN CORROSION/IRRITATION				
Category 1A	Category 1B	Category 1C	Category 2	Category 3
 <p><b>Danger</b> Causes severe skin burns and eye damage</p>	 <p><b>Danger</b> Causes severe skin burns and eye damage</p>	 <p><b>Danger</b> Causes severe skin burns and eye damage</p>	 <p><b>Warning</b> Causes skin irritation</p>	<p><b>No symbol</b></p> <p><b>Warning</b> Causes mild skin irritation</p>

			<p><b>NOT REQUIRED UNDER THE TDG/MR UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b></p> <p><b>Note:</b> For TDG UN Model Regulations pictogram colours: see table above on Corrosive to metals.                  Symbol: black                  background: upper half: white; lower half: black with white border;                  Figure 8: white.</p>
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<b>SERIOUS/VERY EYE DAMAGE/ EYE IRRITATION</b>				
<p><b>Category 1</b></p> <p><b>Danger</b></p> <p>Causes <del>serious</del> eye damage</p>	<p><b>Category 2A</b></p> <p><b>Warning</b></p> <p>Causes <del>serious</del> eye irritation</p>	<p><b>Category 2B</b></p> <p>No symbol</p> <p><b>Warning</b></p> <p>Causes eye irritation</p>	-	-
<p><b>NOT REQUIRED UNDER THE TDG/MR UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b></p>				

<b>RESPIRATORY SENSITIZATION *</b>				
<p><b>Category 1</b></p> <p><b>Danger</b></p> <p>May cause allergy or asthma symptoms or breathing difficulties if inhaled</p>	-	-	-	-
<p>* <b>Note:</b> There has been considerable discussion about what to convey to those exposed about sensitisation effects, and at what point it should be conveyed. While the current cut-off for mixtures is 1%, it appears that the major systems all believe information should be conveyed below that level. This may be appropriate both to warn those already sensitised, as well as to warn those who may become sensitised. [Reserved]*</p>				

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




**NOT REQUIRED UNDER THE ~~TDC/MR~~ UN Recommendations on the Transport of Dangerous Goods, Model Regulations**




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<b>SKIN/DERMAL SENSITIZATION*</b>				
Category 1	-	-	-	-
 <b>Warning</b>  <b>May cause an allergic skin reaction</b>	<p><del>*Note: There has been considerable discussion about what to convey to those exposed about sensitisation effects, and at what point it should be conveyed. While the current cut-off for mixtures is 1%, it appears that the major systems all believe information should be conveyed below that level. This may be appropriate both to warn those already sensitised, as well as to warn those who may become sensitised. [Reserved]*</del></p>			
<b>NOT REQUIRED UNDER THE TDG/MR UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b>				



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\* 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	-	-
				
<b>Danger</b>	<b>Danger</b>	<b>Warning</b>		
<p>May cause genetic defects <i>(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</i></p>	<p>May cause genetic defects <i>(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</i></p>	<p>Suspected of causing genetic defects <i>(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</i></p>		
<p><b>NOT REQUIRED UNDER THE TDG/MR UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b></p>				


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



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

TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)				
Category 1	Category 2	-	-	-
				
<b>Danger</b>	<b>Warning</b>			
<p><b>Causes damage to</b>  <i>(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 )</i></p>	<p><b>May cause damage to</b>  <i>(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 )</i></p>			
<b>NOT REQUIRED UNDER THE UN Recommendations on the Transport of Dangerous Goods, Model Regulations</b>				

TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)				
Category 1	Category 2	-	-	-
				
<b>Danger</b>	<b>Warning</b>			
<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><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><b>NOT REQUIRED UNDER THE UN Recommendations <del>TDG/MR</del> on the Transport of Dangerous Goods, Model Regulations</b></p>				



AQUATIC TOXICITY (ACUTE)				
Category 1	Category 2	Category 3	-	Note
 <p><b>Warning</b> 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 TDC/MR if the substance presents any other hazards covered by UN Model Regulations TDC/MR. If no other hazard is presented, the UN Model Regulations TDC/MR Class 9 label is applicable. The UN Model Regulations TDC/MR requirements are being revised.</p>

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