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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**

**(Second session, 12 -14 December 2001,  
agenda item 3)**

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

**Annexes 1 and 2**

**Transmitted by the Inter-Organization Programme  
for the Sound Management of Chemicals (IOMC)**

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## **Annex 1**

### **Definitions and abbreviations**

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## Definitions and abbreviations

**“ADR”** means the European Agreement concerning the International Carriage of Dangerous Goods by Road (United Nations publication ECE/TRANS/140 (Vol. I and II)).

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

**“Alloy”**: An alloy is a metallic material, homogeneous on a macroscopic scale, consisting of two or more elements so combined that they cannot be readily separated by mechanical means. Alloys are considered to be mixtures for the purpose of classification under the GHS.

**“ASTM”** means the “American Society of Testing and Materials”.

**“BCF”** means “bioconcentration factor”.

**“BOD/COD”** means “biochemical oxygen demand/chemical oxygen demand”.

**“CA”** means “competent authority”.

**“Carcinogen”**: Carcinogen means a chemical substance or a mixture of chemical substances which induce cancer or increase its incidence.

**“CAS”** means “Chemical Abstract Service”.

**“CBI”** means “confidential business information”.

**“Chemical identity”**: Chemical identity means a name that will uniquely identify a chemical. This can be a name that is in accordance with the nomenclature systems of the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS), or a technical name.

**“Compressed gas”**: A gas which when packaged under pressure is entirely gaseous at -50 °C; including all gases with a critical temperature  $\leq$  -50 °C.

**“Contact sensitizer”**: A contact sensitizer is a substance that will induce an allergic response following skin contact.

**“Corrosive to metal”**: A substance or a mixture that is corrosive to metal is a substance or a mixture which by chemical action will materially damage, or even destroy, metals.

**“Critical temperature”** is the temperature above which a pure gas cannot be liquefied, regardless of the degree of compression.

**“Dermal Corrosion”**: Dermal Corrosion is the production of irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following the application of a test substance for up to 4 hours.

**“Dermal irritation”**: Dermal Irritation is the production of reversible damage to the skin following the application of a test substance for up to 4 hours.

**“DIN”** means “drug identification number”.

**“Dissolved gas”**: A gas which when packaged under pressure is dissolved in a liquid phase solvent.

**“EC<sub>50</sub>”** means the effective concentration of drug that causes 50% of the maximum response.

**“ECOSOC”** means the Economic and Social Council of the United Nations.

**“EINECS”** means “European Inventory of Existing Commercial Chemical Substances”.

**“ErC<sub>50</sub>”** means EC<sub>50</sub> in terms of reduction of growth rate.

**“EU”** means “European Union”.

**“Explosive article”**: An article containing one or more explosive substances.

**“Explosive substance”**: A solid or liquid substance (or mixture of substances) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic substances are included even when they do not evolve gases.

**“Eye corrosion”**: Eye corrosion is the production of tissue damage in the eye, or serious physical decay of vision, following application of a test substance to the anterior surface of the eye, which is not fully reversible within 21 days of application.

**“Eye irritation”**: Eye irritation is the production of changes in the eye following the application of test substance to the anterior surface of the eye, which are fully reversible within 21 days of application.

**“Flammable gas”**: A gas having a flammable range with air at 20 °C and a standard pressure of 101.3 kPa.

**“Flammable liquid”**: A flammable liquid means a liquid having a flash point of not more than 93 °C.

**“Flammable solid”**: A flammable solid is a solid which is readily combustible, or may cause or contribute to fire through friction.

**“Flash point”** means the lowest temperature (corrected to a standard pressure of 101.3 kPa) at which the application of an ignition source causes the vapours of a liquid to ignite under specified test conditions.

**“Gas”** means a substance which (a) at 50°C has a vapour pressure greater than 300 kPa; or (b) is completely gaseous at 20°C at a standard pressure of 101.3 kPa.

**“GESAMP”** means “The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection”.

**“GHS”** means “The Globally Harmonized System for Hazard Classification and Communication”.

**“Hazard category”**: This is the term used in the document to describe the division of criteria within each hazard class i.e. oral acute toxicity has five hazard categories and flammable liquids has four hazard categories. These compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

**“Hazard class”**: This is the term used in the document to describe the nature of the physical, health or environmental hazard i.e. carcinogen, flammable solid, oral acute toxicity.

**“Hazard statement”**: A hazard statement means a phrase assigned to a hazard class and category that describes the nature of the hazards of a hazardous product, including, where appropriate, the degree of hazard.

**“IARC”** means the “International Agency for the Research on Cancer”.

**“IMO”** means the “International Maritime Organization”.

**“Initial boiling point”** means the temperature of a liquid at which its vapour pressure is equal to the standard pressure (101.3 kPa), i.e. the first gas bubble appears.

**“IOMC”** means the “Interorganization Programme on the Sound Management of Chemicals”

**“IPCS”** means the “International Programme on Chemical Safety”.

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

**“Label”**: A label means an appropriate group of written, printed or graphic information elements concerning a hazardous product, selected as relevant to the target sector(s), that is affixed to, printed on, or attached to the immediate container of a hazardous product, or to the outside packaging of the hazardous product.

**“Label element”**: A label element means one type of information that has been harmonized for use in a label, e.g. pictogram, signal word.

**“LC<sub>50</sub>”** means the concentration of a material in air which causes the death of 50% (one half) of a group of test animals.

**“LD<sub>50</sub>”** means the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

**“L(E)C<sub>50</sub>”** means LC<sub>50</sub> or EC<sub>50</sub>.

**“Liquefied gas”**: A gas which when packaged under pressure, is partially liquid at temperatures above – 50 °C. A distinction is made between:

- (i) High pressure liquefied gas: a gas with a critical temperature between -50°C and +65°C; and
- (ii) Low pressure liquefied gas: a gas with a critical temperature above +65°C.

**“Liquid”** means a substance which at 50 °C has a vapour pressure of not more than 300 kPa (3 bar), which is not completely gaseous at 20 °C and at a standard pressure of 101.3 kPa, and which has a melting point or initial melting point of 20 °C or less at a standard pressure of 101.3 kPa. A viscous substance for which a specific melting point cannot be determined shall be subjected to the ASTM D 4359-90 test; or to the test for determining fluidity (penetrometer test) prescribed in section 2.3.4 of Annex A of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)<sup>1</sup>.

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<sup>1</sup> United Nations publication: ECE/TRANS/140.

**“Manual of Tests and Criteria”** is the third revised edition of the United Nations publication entitled "Recommendations on the Transport of Dangerous goods, Manual of Tests and Criteria" (ST/SG/AC.10/11/Rev.3).

**“MARPOL”** means the “International Convention for the Prevention of Pollution from Ships”.

**“Mixture”**: Mixtures or solutions composed of two or more substances in which they do not react.

**“Mutagen”** means an agent giving rise to an increased occurrence of mutations in populations of cells and/or organisms.

**“NGO”** means “non-governmental organization”.

**“NOEC”** means the “no observed effect concentration”.

**“OECD”** means “The Organization for Economic Cooperation and Development”.

**“OSHA”** means “The Occupational Safety and Health Administration”.

**“Organic peroxides”**: organic peroxides are liquid or solid organic substances which contain the bivalent -O-O- structure and may be considered derivatives of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals.

**“Oxidizing gas”**: An oxidizing gas is any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does.

**“Oxidizing liquid”**: An oxidizing liquid is a liquid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.

**“Oxidizing solid”**: An oxidizing solid is a solid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.

**“QSAR”** means “quantitative structure-activity relationships”.

**“PIC”** means “prior informed consent”.

**“Pictogram”**: A pictogram means a composition that may include a symbol plus other graphic elements, such as a border, background pattern or colour that is intended to convey specific information.

**“Precautionary statement”**: A precautionary statement means a phrase (and/or pictogram) that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous product, or improper storage or handling of a hazardous product.

**“Product identifier”**: A product identifier means the name or number used for a hazardous product on a label or in the SDS. It provides a unique means by which the product user can identify the substance or mixture within the particular use setting e.g. transport, consumer or workplace.

**“Pyrophoric liquid”**: A pyrophoric liquid is a liquid which, even in small quantities, is liable to ignite within five minutes after coming into contact with air.



**“Pyrophoric solid”:** A pyrophoric solid is a solid which, even in small quantities, is liable to ignite within five minutes after coming into contact with air.

**“Pyrotechnic article”:** An article containing one or more pyrotechnic substances.

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

**“Readily combustible solid”:** Readily combustible solids are powdered, granular, or pasty substances which are dangerous if they can be easily ignited by brief contact with an ignition source, such as a burning match, and if the flame spreads rapidly.

**“Refrigerated liquefied gas”:** A gas which when packaged is made partially liquid because of its low temperature.

**“Respiratory Sensitizer”:** A respiratory sensitizer is a substance that will induce hypersensitivity of the airways following inhalation of the substance.

**“RID”** means Regulations concerning the International Carriage of Dangerous Goods by Rail [Annex 1 to Appendix B (Uniform Rules concerning the Contract for International Carriage of Goods by Rail) (CIM) of COTIF (Convention concerning international carriage by rail)]

**“SAR”** means “structure activity relationship”.

**“SDS”** means “safety data sheet”.

**“Self-accelerating decomposition temperature (SADT)”** means the lowest temperature at which self-accelerating decomposition may occur with substance as packaged.

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

**“Self-reactive substance”:** Self-reactive substances are thermally unstable liquid or solid substances liable to undergo a strongly exothermic decomposition even without participation of oxygen (air). This definition excludes substances or mixtures classified under the GHS as explosive, organic peroxides or as oxidizing.

**“Signal word”:** A signal word means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The GHS uses ‘Danger’ and ‘Warning’.

**“Solids”** are substances which do not meet the definitions of liquids or gases.

**“SPR”** means “structure property relationship”.

**“Substance”:** Chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

**“Substances which, in contact with water, emit flammable gases”** are solid or liquid substances which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

**“Supplemental label element”**: A supplemental label element means any additional non-harmonized type of information supplied on the container of a hazardous product that is not required or specified under the GHS. In some cases this information may be required by other competent authorities or it may be additional information provided at the discretion of the manufacturer/distributor.

**“Symbol”**: A symbol means a graphical element intended to succinctly convey information.

**“Technical name”**: A name that is generally used in commerce, regulations and codes to identify a substance or mixture, other than the IUPAC or CAS name, and that is recognized by the scientific community. Examples of technical names include those used for complex mixtures (e.g., petroleum fractions or natural products), pesticides (e.g., ISO or ANSI systems), dyestuffs (Colour Index system) and minerals.

**“UNCED”** means the “United Nation Conference on Environment and Development”.

**“UNCETDG/GHS”** means the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

**“UN Model Regulations”** means the Model Regulations annexed to the twelfth revised edition of the Recommendations on the Transport of Dangerous Goods published by the United Nations (ST/SG/AC.10/1/Rev.12).

**“UNSCGHS”** means the United Nations Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals.

**“UNSCETDG”** means the United Nations Sub-Committee of Experts for the Transport of Dangerous Goods.










## **ANNEX 2**



### **Allocation of label elements**





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## Allocation of label elements









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 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 *
Danger Explosive; mass explosion hazard	Danger Explosive; severe projection hazard	Danger Explosive; fire, blast or projection hazard	* Apply to substances or mixtures subject to UN TDG/MR requirements only (see also par. 41)		
					
<b>Notes on colours of TDG 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> <b>Extremely flammable gas</b>	<b>No symbol</b>  <b>Warning</b> <b>Flammable gas</b>			<b>Under the TDG/MR, the symbol, number and border line may be shown in black instead of white. The background colour stays red in both cases.</b>
   	<b>NOT REQUIRED UNDER THE TDG/MR</b>			

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










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


GASES UNDER PRESSURE				
Compressed gas	Liquefied gas	Refrigerated liquefied gas	Dissolved gas	Notes on TDG/MR pictogram
 <b>Warning</b> Contains gas under pressure; may explode if heated	 <b>Warning</b> Contains gas under pressure; may explode if heated	 <b>Warning</b> Contains refrigerated gas; may cause cryogenic burns or injury	 <b>Warning</b> 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	
 <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><b>Note on TDG/MR pictogram</b> 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/MR</b></p>	





FLAMMABLE SOLIDS				
Category 1	Category 2	-	-	Note
 <p><b>Danger</b> Flammable solid</p>	 <p><b>Warning</b> Flammable solid</p>			<p><b>Colours for TDG Pictogram:</b> 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 TDG/MR
<b>Notes:</b> (1) For Type B, under TDG/MR, special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of RTDG for more details). (2) For colours of TDG pictograms see descriptions for Flammable Solids and Explosives.				







PYROPHORIC LIQUIDS				
Category 1	-	-	-	Notes
 <b>Danger</b> Catches fire spontaneously if exposed to air				<b>Colours of TDG pictogram:</b> Symbol and Figure: black. Background: upper half : white; lower half : red.










				
PYROPHORIC SOLIDS				
Category 1	-	-	-	Note
 <p><b>Danger</b></p> <p>Catches fire spontaneously if exposed to air</p>				<u>Colours of TDG pictogram:</u> See table for pyrophoric liquids.
				



SELF-HEATING SUBSTANCES				
Category 1	Category 2	-	-	Note
 <p><b>Danger</b></p> <p>Self-heating; may catch fire</p>	 <p><b>Warning</b></p> <p>Self-heating in large quantities; may catch fire</p>			<u>Colours of TDG pictogram:</u> See table for pyrophoric liquids.
				








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








OXIDIZING LIQUIDS				
Category 1	Category 2	Category 3	-	Note
 <p><b>Danger</b></p> <p>May cause fire or explosion; strong oxidizer</p>	 <p><b>Danger</b></p> <p>May intensify fire; oxidizer</p>	 <p><b>Warning</b></p> <p>May intensify fire; oxidizer</p>		<p><b><u>TDG Pictogram colours:</u></b> Symbol and number: black. Background: yellow.</p>
				








OXIDIZING SOLIDS				
Category 1	Category 2	Category 3	-	Note
 <p><b>Danger</b></p> <p>May cause fire or explosion; strong oxidizer</p>	 <p><b>Danger</b></p> <p>May intensify fire; oxidizer</p>	 <p><b>Warning</b></p> <p>May intensify fire; oxidizer</p>		<b>TDG Pictogram colours:</b> See table above on Oxidizing liquids.
				








ORGANIC PEROXIDES				
Type A	Type B	Types C and D	Types E and F	Type G
 <p><b>Danger</b></p> <p>Heating may cause An explosion</p>	  <p><b>Danger</b></p> <p>Heating may cause a fire or explosion</p>	 <p><b>Danger</b></p> <p>Heating may cause a fire</p>	 <p><b>Warning</b></p> <p>Heating may cause a fire</p>	<p>There are no label elements allocated to this hazard class.</p>
<p>Same as for explosives (follow same symbol selection process)</p>	 			<p><b>NOT REQUIRED UNDER TDG/MR</b></p>
<b>Notes:</b> (1) For Type B, under TDG/MR, special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of RTDG for more details). (2) TDG Pictogram colours: See tables for Oxidizing liquids and Explosives.				



CORROSIVE TO METALS				
Category 1	-	-	-	Note
 <p><b>Warning</b></p> <p><b>May be corrosive to metals</b></p>				<p><b><u>TDG pictogram colours:</u></b>  <b>Symbol: black</b>  <b>background: upper half: white; lower half: black with white border;</b>  <b>Figure 8: white.</b></p>
				


ACUTE TOXICITY: ORAL				
Category 1	Category 2	Category 3	Category 4	Category 5
 <b>Danger</b> <b>Fatal if swallowed</b>	 <b>Danger</b> <b>Fatal if swallowed</b>	 <b>Danger</b> <b>Toxic if swallowed</b>	 <b>Warning</b> <b>Harmful if swallowed</b>	 <b>No symbol</b>  <b>Warning</b> <b>May be harmful if swallowed</b>
			<b>NOT REQUIRED UNDER THE TDG/MR</b> <u>Notes:</u> For gases and aerosols under the TDG/MR, replace the number 6 in the bottom corner of the pictogram by 2. TDG pictogram colours: Symbol and figure: black. Background: white.	


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

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




SKIN CORROSION/IRRITATION				
Category 1A	Category 1B	Category 1C	Category 2	Category 3
 <b>Danger</b> <b>Causes severe skin burns and eye damage</b>	 <b>Danger</b> <b>Causes severe skin burns and eye damage</b>	 <b>Danger</b> <b>Causes severe skin burns and eye damage</b>	 <b>Warning</b> <b>Causes skin irritation</b>	<b>No symbol</b>  <b>Warning</b> <b>Causes mild skin irritation</b>
			<b>NOT REQUIRED UNDER THE TDG/MR</b> <b>Note:</b> For TDG pictogram colours see table above on Corrosive to metals.	




SEVERE EYE DAMAGE/ EYE IRRITATION				
Category 1	Category 2A	Category 2B	-	-
 <b>Danger</b> Causes severe eye damage	 <b>Warning</b> Causes severe eye irritation	<b>No symbol</b>  <b>Warning</b> Causes eye irritation		
NOT REQUIRED UNDER THE TDG/MR				




RESPIRATORY SENSITIZATION *				
Category 1	-	-	-	-
<div><p><b>Danger</b></p><p><b>May cause allergy or asthma symptoms or breathing difficulties if inhaled</b></p></div>	<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. This issue was not clear during the initial deliberations on the criteria for mixtures containing sensitizers, and thus has not been adequately discussed nor options explored. Before the system becomes implemented, this issue should be revisited by the ECOSOC Subcommittee on GHS as one of its priorities. It should be noted that the sensitisation criteria for substances will also have to be re-opened to consider this issue and the inclusion of a test method currently being reviewed that addresses the question of strong sensitizers versus those that are weaker. Appropriate hazard communication should be considered along with the discussions on the criteria and the availability of an appropriate test method.</p>			
NOT REQUIRED UNDER THE TDG/MR				



DERMAL SENSITIZATION*				
Category 1	-	-	-	-
<div><p><b>Warning</b></p><p><b>May cause an allergic skin reaction</b></p></div>	<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. This issue was not clear during the initial deliberations on the criteria for mixtures containing sensitizers, and thus has not been adequately discussed nor options explored. Before the system becomes implemented, this issue should be revisited by the ECOSOC Subcommittee on GHS as one of its priorities. It should be noted that the sensitisation criteria for substances will also have to be re-opened to consider this issue and the inclusion of a test method currently being reviewed that addresses the question of strong sensitizers versus those that are weaker. Appropriate hazard communication should be considered along with the discussions on the criteria and the availability of an appropriate test method.</p>			
NOT REQUIRED UNDER THE TDG/MR				






GERM CELL MUTAGENICITY				
Category 1A	Category 1B	Category 2	-	-
 <p><b>Danger</b></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><b>Danger</b></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><b>Warning</b></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 TDG/MR				



CARCINOGENICITY				
Category 1A	Category 1B	Category 2	-	-
 <p><b>Danger</b></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><b>Danger</b></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><b>Warning</b></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 TDG/MR				

TOXIC TO REPRODUCTION				
Category 1A	Category 1B	Category 2	Additional Category	-
 <p><b>Danger</b></p> <p>May damage fertility or the unborn child (state specific effect if known or route of exposure if it is conclusively proven that no other routes of exposure cause the hazard )</p>	 <p><b>Danger</b></p> <p>May damage fertility or the unborn child (state specific effect if known or route of exposure if it is conclusively proven that no other routes of exposure cause the hazard )</p>	 <p><b>Warning</b></p> <p>Suspected of damaging fertility or the unborn child (state specific effect if known or 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>	
NOT REQUIRED UNDER THE TDG/MR				

TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)				
Category 1	Category 2	-	-	-
 <p><b>Danger</b></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><b>Warning</b></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 TDG/MR				

TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)				
Category 1	Category 2	-	-	-
 <p><b>Danger</b></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><b>Warning</b></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>			
NOT REQUIRED UNDER THE TDG/MR				

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

<b>AQUATIC TOXICITY (CHRONIC)</b>				
<b>Category 1</b>	<b>Category 2</b>	<b>Category 3</b>	<b>Category 4</b>	<b>Note</b>
 <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 TDG/MR if the substance presents any other hazards covered by TDG/MR. If no other hazard is presented, TDG/MR Class 9 label is applicable. The TDG/MR requirements being revised.</b></p>