



Secretariat

Distr.: General
21 September 2012

Original: English

**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**

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**

**Improvement of the presentation of annexes 1 and 2 of the
GHS**

**Transmitted by the expert from Sweden on behalf of the informal
correspondence group on the improvement of annexes 1, 2 and 3 of the
GHS¹**

Background

1. At the 20th session of the Sub-Committee the following terms of reference were agreed for the continuing work of the informal correspondence group on improvement of Annexes 1-3 of the GHS:

“Pursue work to further improve Annexes 1, 2 and 3 of the GHS, following the workstreams hereafter, with the first two given priority:

- (i) Workstream 1: to develop proposals to rationalize and improve the usability of hazard and precautionary statements, including proposals to eliminate redundancies among these statements;

¹ In accordance with the programme of work of the Sub-Committee for 2011-2012 approved by the Committee at its fifth session (refer to ST/SG/AC.10/C.3/76, para. 116 and ST/SG/AC.10/38, para. 16).

- (ii) Workstream 2: to adjust as appropriate the precautionary statements for physical hazards, their allocation to hazard classes and categories, and their conditions for use;
 - (iii) Workstream 3: to improve the presentation of Annexes 1, 2 and 3 of the GHS, taking into account the intended audiences, uses and purposes of the GHS”.
2. Addressing Workstream 3, a proposal for a revised annex, combining the information presented in Annexes 1 and 2 of the GHS, was presented at the 23rd session of the Sub-Committee (INF.16).
 3. The proposal received positive response at the meeting and Sweden volunteered to bring the proposal forward, on behalf of the informal correspondence group, in a working document to the next session of the Sub-Committee.

Proposal












4. While a summary table of labelling elements, including the transport pictograms, is desirable, inclusion of the classification criteria in an Annex (as in current annex 2) is not desirable as that may draw attention away from the main text of the GHS where the criteria are described at length.
5. Therefore, it is proposed to merge the current annexes 1 and 2 of the GHS into one single annex 1 to read as follows:

“Annex 1

CLASSIFICATION AND LABELLING SUMMARY TABLES

NOTE: The codification of hazard statements is further explained in Annex 3 (Section 1). The hazard statement codes are intended to be used for reference purposes only. They are not part of the hazard statement text and should not be used to replace it.



A1.1 Explosives (see Chapter 2.1 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Explosives	Unstable explosive		(Transport not allowed)	Danger	Unstable explosive	H200
	Division 1.1				Explosive; mass explosion hazard	H201
	Division 1.2				Explosive; severe projection hazard	H202
	Division 1.3				Explosive; fire, blast or projection hazard	H203
	Division 1.4			Warning	Fire or projection hazard	H204
	Division 1.5	No pictogram		Danger	May mass explode in fire	H205
	Division 1.6	No pictogram		No signal word	No hazard statement	None

^a (*) Place for compatibility group.






The pictogram for Divisions 1.1, 1.2 and 1.3 is also assigned to substances which have an explosive subsidiary risk, but without the indication of the division number and the compatibility group (see also “Self-reactive substances and mixtures” and “Organic peroxides”).

A1.2 Flammable gases (including chemically unstable gases) (see Chapter 2.2 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Flammable gases (including chemically unstable gases)	1			Danger	Extremely flammable gas	H220
	2	No pictogram	Not required	Warning	Flammable gas	H221
	A (chemically unstable gases)	No additional pictogram	Not required	No additional signal word	Additional hazard statement: May react explosively even in the absence of air	H230
	B (chemically unstable gases)	No additional pictogram	Not required	No additional signal word	Additional hazard statement: May react explosively even in the absence of air at elevated pressure and/or temperature	H231



^a Under the UN 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.

A1.3 Aerosols (see Chapter 2.3 for classification criteria)









Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Aerosols	1			Danger	Extremely flammable aerosol Pressurized container: may burst if heated	H222 H229
	2			Warning	Flammable aerosol Pressurized container: may burst if heated	H223 H229
	3	No pictogram		Warning	Pressurized container: may burst if heated	H229

^a Under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the symbol, number and border line may be shown in black or white. The background colour stays red in the first two cases and green in the third case.

A1.4 Oxidizing gases (see Chapter 2.4 for classification criteria)







Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Oxidizing gases	1			Danger	May cause or intensify fire; oxidizer	H270

A1.5 Gases under pressure (see Chapter 2.5 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Gases under pressure	Compressed gas			Warning	Contains gas under pressure; may explode if heated	H280
	Liquefied gas			Warning	Contains gas under pressure; may explode if heated	H280
	Refrigerated liquefied gas			Warning	Contains refrigerated gas; may cause cryogenic burns or injury	H281
	Dissolved gas			Warning	Contains gas under pressure; may explode if heated	H280





^a Under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the symbol, number and border line may be shown in white instead of black. The background colour stays green in both cases. This pictogram is not required for toxic or flammable gases (see also note "a" to tables A1.17 and A1.2).

A1.6 Flammable liquids (see Chapter 2.6 for classification criteria)








Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Flammable liquids	1			Danger	Extremely flammable liquid and vapour	H224
	2			Danger	Highly flammable liquid and vapour	H225
	3			Warning	Flammable liquid and vapour	H226
	4	No pictogram	Not required	Warning	Combustible liquid	H227

^a Under the UN 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.

A1.7 Flammable solids (see Chapter 2.7 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Flammable solids	1			Danger	Flammable solid	H228
	2			Warning	Flammable solid	H228



A1.8 Self-reactive substances and mixtures (see Chapter 2.8 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Self-reactive substances and mixtures	Type A		<i>(Transport may not be allowed)^b</i>	Danger	Heating may cause an explosion	H240
	Type B			Danger	Heating may cause a fire or explosion	H241
	Types C and D			Danger	Heating may cause a fire	H242
	Types E and F			Warning	Heating may cause a fire	H242
	Type G	<i>No pictogram</i>	<i>Not required</i>	<i>No signal word</i>	<i>No hazard statement</i>	<i>None</i>



^a For Type B, under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of UN Model Regulations for more details).

^b May not be acceptable for transport in the packaging in which it is tested (See Chapter 2.5, par. 2.5.3.2.2 of the UN Model Regulations).





A1.9 Pyrophoric liquids (see Chapter 2.9 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Pyrophoric liquids	1			Danger	Catches fire spontaneously if exposed to air	H250







A1.10 Pyrophoric solids (see Chapter 2.10 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Pyrophoric solids	1			Danger	Catches fire spontaneously if exposed to air	H250

A1.11 Self-heating substances and mixtures (see Chapter 2.11 for classification criteria)







Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Self-heating substances and mixtures	1			Danger	Self-heating; may catch fire	H251
	2			Warning	Self-heating in large quantities; may catch fire	H252

A1.12 Substances and mixtures, which in contact with water, emit flammable gases (see Chapter 2.12 for classification criteria)







Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Substances and mixtures, which in contact with water, emit flammable gases	1			Danger	In contact with water releases flammable gases which may ignite spontaneously	H260
	2			Danger	In contact with water releases flammable gases	H261
	3			Warning	In contact with water releases flammable gases	H261

^a Under the UN 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 blue in both cases.








A1.13 Oxidizing liquids (see Chapter 2.13 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Oxidizing liquids	1			Danger	May cause fire or explosion; strong oxidizer	H271
	2			Danger	May intensify fire; oxidizer	H272
	3			Warning	May intensify fire; oxidizer	H272

A1.14 Oxidizing solids (see Chapter 2.14 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Oxidizing solids	1			Danger	May cause fire or explosion; strong oxidizer	H271
	2			Danger	May intensify fire; oxidizer	H272
	3			Warning	May intensify fire; oxidizer	H272



A1.15 Organic peroxides (see Chapter 2.15 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Organic peroxides	Type A		(Transport may not be allowed) ^b	Danger	Heating may cause an explosion	H240
	Type B			Danger	Heating may cause a fire or explosion	H241
	Types C and D			Danger	Heating may cause a fire	H242
	Types E and F			Warning	Heating may cause a fire	H242
	Type G	No pictogram	Not required	No signal word	No hazard statement	None








^a For Type B, under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, special provision 181 may apply (Exemption of explosive label with competent authority approval. See Chapter 3.3 of UN Model Regulations for more details).

^b May not be acceptable for transport in the packaging in which it is tested (See Chapter 2.5, par. 2.5.3.2.2 of the UN Model Regulations).

A1.16 Corrosive to metals (see Chapter 2.16 for classification criteria)




Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Corrosive to metals	1			Warning	May be corrosive to metals	H290

A1.17 Acute toxicity (see Chapter 3.1 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Acute toxicity	1			Danger	Fatal if swallowed	H300
					Fatal in contact with skin	H310
					Fatal if inhaled	H330
	2			Danger	Fatal if swallowed	H300
					Fatal in contact with skin	H310
					Fatal if inhaled	H330
	3			Danger	Toxic if swallowed	H301
					Toxic in contact with skin	H311
					Toxic if inhaled	H331
	4		Not required	Warning	Harmful if swallowed	H302
					Harmful in contact with skin	H312
					Harmful if inhaled	H332
	5	No pictogram	Not required	Warning	May be harmful if swallowed	H303
					May be harmful in contact with skin	H313
					May be harmful if inhaled	H333



^a For gases, under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, replace the number "6" in the bottom corner of the pictogram by "2".

A1.18 Skin corrosion/irritation (see Chapter 3.2 for classification criteria)




Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Skin corrosion/irritation	1 Corrosive (including A, B and C)			Danger	Causes severe skin burns and eye damage	H314
	2 Irritant		<i>Not required</i>	Warning	Causes skin irritation	H315
	3 Mild irritant ^a	<i>No pictogram</i>	<i>Not required</i>	Warning	Causes mild skin irritation	H316

^a Applies to some authorities.

A1.19 Serious eye damage/eye irritation (see Chapter 3.3 for classification criteria)




Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Serious eye damage/eye irritation	1 Irreversible effects		<i>Not required</i>	Danger	Causes serious eye damage	H318
	2/2A Irritant		<i>Not required</i>	Warning	Causes serious eye irritation	H319
	2B Mild irritant	<i>No pictogram</i>	<i>Not required</i>	Warning	Causes eye irritation	H320

A1.20 Respiratory sensitization (see Chapter 3.4 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Respiratory sensitization	1		<i>Not required</i>	Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled	H334
	1A ^a		<i>Not required</i>	Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled	H334
	1B ^a		<i>Not required</i>	Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled	H334



^a Sub-categories may be applied where data are sufficient and where required by a competent authority.

A1.21 Skin sensitization (see Chapter 3.4 for classification criteria)



Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Skin sensitization	1		<i>Not required</i>	Warning	May cause an allergic skin reaction	H317
	1A ^a		<i>Not required</i>	Warning	May cause an allergic skin reaction	H317
	1B ^a		<i>Not required</i>	Warning	May cause an allergic skin reaction	H317

^a Sub-categories may be applied where data are sufficient and where required by a competent authority.



A1.22 Germ cell mutagenicity (see Chapter 3.5 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Germ cell mutagenicity	1 (both 1A and 1B)		<i>Not required</i>	Danger	May cause genetic defects (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H340
	2		<i>Not required</i>	Warning	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>)	H341




A1.23 Carcinogenicity (see Chapter 3.6 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Carcinogenicity	1 (both 1A and 1B)		<i>Not required</i>	Danger	May cause cancer (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H350
	2		<i>Not required</i>	Warning	Suspected of causing cancer (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H351



A1.24 Toxic to reproduction (see Chapter 3.7 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Toxic to reproduction	1 (both 1A and 1B)		<i>Not required</i>	Danger	May damage fertility or the unborn child (<i>state specific effect if known</i>) (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H360
	2		<i>Not required</i>	Warning	Suspected of damaging fertility or the unborn child (<i>state specific effect if known</i>) (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H361
	Additional category for effects on or via lactation	<i>No pictogram</i>	<i>Not required</i>	<i>No signal word</i>	May cause harm to breast-fed children	H362



A1.25 Specific target organ toxicity following single exposure (see Chapter 3.8 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Specific target organ toxicity following single exposure	1		Not required	Danger	Causes damage to organs (<i>or state all organs affected, if known</i>) (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H370
	2		Not required	Warning	May cause damage to organs (<i>or state all organs affected, if known</i>) (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H371
	3		Not required	Warning	May cause respiratory irritation or May cause dizziness or drowsiness	H335 H336



A1.26 Specific target organ toxicity following repeated exposure (see Chapter 3.9 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Specific target organ toxicity following repeated exposure	1		Not required	Danger	Causes damage to organs (<i>state all organs affected, if known</i>) through prolonged or repeated exposure (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H372
	2		Not required	Warning	May cause damage to organs (<i>state all organs affected, if known</i>) through prolonged or repeated exposure (<i>state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard</i>)	H373

A1.27 Aspiration hazard (See chapter 3.10 for classification criteria)





Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Aspiration hazard	1		<i>Not required</i>	Danger	May be fatal if swallowed and enters airways	H304
	2		<i>Not required</i>	Warning	May be harmful if swallowed and enters airways	H305

A1.28 (a) Short-term (acute) hazards to the aquatic environment (see Chapter 4.1 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Short-term (Acute) hazards to the aquatic environment	Acute 1			Warning	Very toxic to aquatic life	H400
	Acute 2	No pictogram	Not required	No signal word	Toxic to aquatic life	H401
	Acute 3	No pictogram	Not required	No signal word	Harmful to aquatic life	H402


^a For category 1, under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the pictogram is not required if the substance presents any other hazards covered by UN Model Regulations. If no other hazard is presented, this pictogram is required as a mark in addition to the UN Model Regulations Class 9 label.

A1.28 (b) Long-term (chronic) hazards to the aquatic environment (see Chapter 4.1 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations ^a			
Long-term (Chronic) hazards to the aquatic environment	Chronic 1			Warning	Very toxic to aquatic life with long lasting effects	H410
	Chronic 2			No signal word	Toxic to aquatic life with long lasting effects	H411
	Chronic 3	No pictogram	Not required	No signal word	Harmful to aquatic life with long lasting effects	H412
	Chronic 4	No pictogram	Not required	No signal word	May cause long lasting harmful effects to aquatic life	H413

^a For categories 1 and 2, under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, the pictogram is not required if the substance presents any other hazards covered by UN Model Regulations. If no other hazard is presented, this pictogram is required as a mark in addition to the UN Model Regulations Class 9 label.

A1.29 Hazardous to the ozone layer (see Chapter 4.2 for classification criteria)

Classification		Labelling				
Hazard class	Hazard category	Pictogram		Signal word	Hazard statement	Code
		GHS	UN Model Regulations			
Hazard to the ozone layer	1		<i>Not required</i>	Warning	Harms public health and the environment by destroying ozone in the upper atmosphere	H420

6. Consequential amendments to other parts of the GHS:

- Replace current annex 2 (title and contents) with the mention “Annex 2 (Reserved)”.
- Replace “Annex 2” with “Annex 1” throughout the GHS text.

(Applies to: 2.1.3, second sentence; 2.2.3, second sentence; 2.3.3, second sentence; 2.4.3, second sentence; 2.5.3, second sentence; 2.6.3, second sentence; 2.7.3, second sentence; 2.8.3, second sentence; 2.9.3, second sentence; 2.10.3, second sentence; 2.11.3, second sentence; 2.12.3, second sentence; 2.13.3, second sentence; 2.14.3, second sentence; 2.15.3, second sentence; 2.16.3, second sentence; 3.1.4.1, second sentence; 3.2.4, second sentence; 3.3.4, second sentence; 3.4.4.1, second sentence; 3.5.4, second sentence; 3.6.4, second sentence; 3.7.4, second sentence; 3.8.4.1, second sentence; 3.9.4, second sentence; 3.10.4.1, second sentence; 4.1.4, second sentence; 4.2.3, second sentence).

- In the table of contents:

Amend the title of Annex 1 to read “Annex 1 Classification and labelling summary tables” and replace the title of Annex 2 with the mention “(Reserved)”.