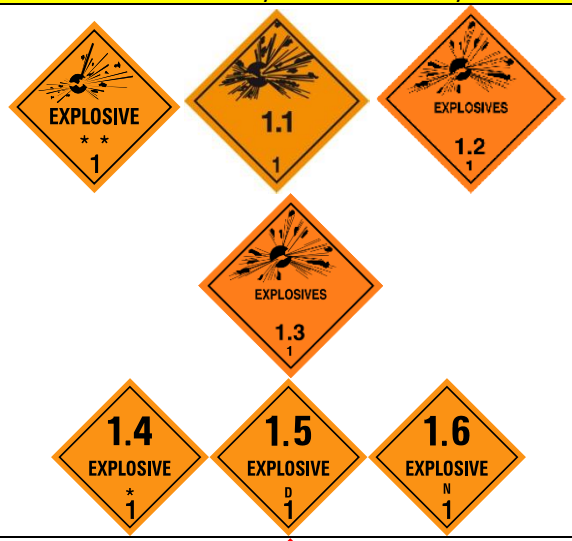
HS682: The Globally Harmonized System (GHS) Hazard Classes Summary

This table provides a summary of the three Hazard Groups (Physical, Health and Environmental) and the corresponding Hazard Classes within each group under the United Nations developed GHS system. The full text for the GHS system referred to as the 'Purple Book' is available here. The GHS system has been incorporated into Chapter 7 of the WHS Regulation. Refer to the Safe Work Australia Code of Practice for Labelling of Workplace Hazardous Chemicals from which this table has been compiled.

Under the GHS System there are 16 Physical Hazard Classes

#	Hazard Class	Hazard Category	Corresponding Hazard Statement for this specific hazard class and category	Pictogram	Signal Word	Dangerous Goods Class Diamond for comparison (if applicable).FOR INFORMATION ONLY. A label should not contain MIXED DG symbols and GHS symbols
1	Explosives	Unstable Explosives Division 1.1 Division 1.2 Division 1.3 Division 1.4	Unstable explosive Explosive; mass explosion hazard Explosive; severe projection hazard Explosive; fire/blast or projection hazard Fire/projection hazard		Danger Danger Danger Danger Warning	
		Division 1.5 Division 1.6	May mass explode in fire No hazard statement	No pictogram No pictogram	Danger Warning	
2	Flammable Gases	Category 1	Extremely flammable gas		Danger	
3	Flammable Aerosols	Category 1 Category 2	Extremely flammable aerosol Flammable aerosol		Danger Warning	

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4	Oxidising Gases	Category 1	May cause or intensify fire; Oxidiser		Danger	
5	Gases under Pressure	Groups Compressed gas Liquefied gas Dissolved gas Refrigerated liquefied gas	 Contains gas under pressure; may explode if heated Contains gas under pressure; may explode if heated Contains gas under pressure; may explode if heated Contains refrigerated gas; may cause cryogenic burns or injury		 Warning Warning Warning Warning	
6	Flammable Liquids	Category 1 Category 2 Category 3	Extremely flamable liquid and vapour Highly flammable liquid and vapour Flammable liquid and vapour		Danger Danger Warning	
		Category 4	Combustible liquid	No pictogram	Warning	
7	Flammable Solids	Category 1 Category 2	Flammable solid Flammable solid		Danger Warning	
8	Self Reactive Substances and	Type A	Heating may cause an explosion		Danger	

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	Mixtures	Type B	Heating may cause a fire or explosion		Danger	
		Type C and D Type E and F	Heating may cause a fire Heating may cause a fire		Danger Warning	
		Type G	No hazard statement	No Pictogram	None	
9	Organic Peroxides	Type A	Heating may cause an explosion		Danger	
		Type B	Heating may cause a fire or explosion		Danger	
		Type C and D Type E and F	Heating may cause a fire Heating may cause a fire		Danger Warning	
		Type G	No hazard statement	No Pictogram	None	
10	Pyrophoric Liquids	Category 1	Catches fire spontaneously if exposed to air		Danger	

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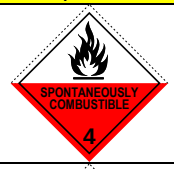
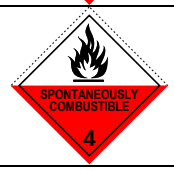
11	Pyrophoric Solids	Category 1	Catches fire spontaneously if exposed to air		Danger	
12	Self-heating substances and mixtures	Category 1 Category 2	Self heating; may catch fire Self heating in large quantities; may catch fire		Danger Warning	
13	Substances and mixtures which in contact with water emit flammable gases	Category 1 Category 2 Category 3	In contact with water releases flammable gas which may spontaneously ignite In contact with water releases flammable gas In contact with water releases flammable gas		Danger Danger Warning	
14	Oxidising Liquids	Category 1 Category 2 Category 3	May cause fire or explosion; strong oxidiser May intensify fire; oxidiser May intensify fire;oxidiser		Danger Danger Warning	
15	Oxidising Solids	Category 1 Category 2 Category 3	May cause fire or explosion; strong oxidiser May intensify fire; oxidiser May intensify fire;oxidiser		Danger Danger Warning	
16	Corrosive to metals	Category 1	May be corrosive to metals		Warning	

There are 10 Health Hazard Classes:

#	Hazard Class	Hazard Category	Hazard Statement	Pictogram	Signal Word	Dangerous Goods Class Diamond
1	Acute Toxicity Oral, Dermal or Inhalation	Category 1 Category 2 Category 3	Fatal if swallowed,in contact with skin, inhaled (as per route) Fatal if swallowed,in contact with skin, inhaled (as per route) Toxic if swallowed, in contact with skin, inhaled (as per route)		Danger Danger Danger	
		Category 4	Harmful if swallowed, in contact with skin, inhaled (as per route)		Warning	
2	Skin Corrosion / Irritation	Category 1A Category 1B Category 1C	Causes severe skin burns and eye damage Causes severe skin burns and eye damage Causes severe skin burns and eye damage		Danger Danger Danger	
		Category 2	Causes skin irritation		Warning	
3	Serious Eye Damage / Eye Irritation	Category 1	Causes serious eye damage		Danger	
		Category 2A	Causes serious eye irritation		Warning	
4	Sensitisation of the respiratory tract or the skin	Respiratory Sensitisers Category 1,1A,1B	May cause allergy or asthma symptoms or breathing difficulties if inhaled		Danger	None

#	Hazard Class	Hazard Category	Hazard Statement	Pictogram	Signal Word	Dangerous Goods Class Diamond
		Skin Sensitisers Category 1,1A,1B	May cause an allergic skin reaction		Warning	None
5	Germ cell mutagenicity	Category 1A Category 1B Category 2	May cause genetic defects May cause genetic defects Suspected of causing genetic defects		Danger Danger Warning	None
6	Carcinogenicity	Category 1A Category 1B Category 2	May cause cancer May cause cancer Suspected of causing cancer		Danger Danger Warning	None
7	Reproductive Toxicity	Category 1A Category 1B Category 2	May damage fertility or the unborn child May damage fertility. Suspected of damaging the unborn child Suspected of damaging fertility or the unborn child		Danger Danger Warning	None
		Lactation Effects	May cause harm to breast- fed children	No pictogram	No signal word	
8	Specific Target Organ Toxicity (single exposure)	Category 1 Category 2	Causes damage to organs (*name organs*) May cause damage to organs		Danger Warning	None
		Category 3	May cause respiratory irritation or May cause drowsiness or dizziness		Warning Warning	
9	Specific Target Organ Toxicity (repeated exposure)	Category 1 Category 2	Causes damage to organs (*name*) through prolonged or repeated exposure May cause damage to organs through prolonged or repeated exposure		Danger Warning	None
10	Aspiration Toxicity	Category 1	May be fatal if swallowed and enters airways		Danger	None

There are 2 Environmental Hazard Classes which are not compulsory in Australia

Refer to UNSW HS332 Hazardous Chemicals Procedure

#	Hazard Class	Hazard Category	Hazard Statement	Pictogram	Signal word	Dangerous Goods Class Diamond
1	Aquatic Toxicity Acute	Category 1	Very toxic to aquatic life		Warning	None
		Category 2 Category 3	Toxic to aquatic life Harmful to aquatic life	No Pictogram	None None	None
2	Aquatic Toxicity Chronic	Category 1 Category 2	Very toxic to aquatic life with long lasting effects Toxic to aquatic life with long lasting effects		Warning No signal word	None
		Category 3 Category 4	Harmful to aquatic life with long lasting effects May cause long lasting harmful effects to aquatic life	No Pictogram	No Signal word No signal word	None

There are 6 additional non GHS PHYSICAL hazard statements which should be included on labels of Hazardous Chemicals **as applicable**

AUH001: Explosive when dry	e.g. for substances wetted to supress their explosive properties
AUH006: Explosive with or without contact with air	e.g. substances unstable at ambient temp.
AUH014: Reacts violently with water	e.g. acetyl chloride, alkali metals and titanium tetrachloride
AUH018: In use, may form flammable/explosive vapour-air mixture	e.g. halogenated hydrocarbons
AUH019: May form explosive peroxides	e.g. diethyl ether, 1,4-dioxan.
AUH044: Risk of explosion if heated under confinement	

There are 6 additional non GHS HEALTH hazard statements which should be included on labels of Hazardous Chemicals as applicable

AUH029: Contact with water liberates toxic gas	e.g. aluminium phosphide, phosphorus pentasulphide.
AUH031: Contact with acids liberates toxic gas:	e.g. sodium hypochlorite and barium polysulphide
AUH032: Contact with acids liberates very toxic gas:	e.g. salts of hydrogen cyanide, sodium azide.
AUH066: Repeated exposure may cause skin dryness or cracking:	But such substances did not meet the criteria for skin irritancy
AUH070: Toxic by eye contact	likely to be caused by absorption of the substance through the mucous membranes of the eye.
AUH071: Corrosive to the respiratory tract	Substances which, in addition to **toxic** by inhaltion also are **corrosive** by inhalation