

















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 <u>should not</u> 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 |  |













Refer to UNSW HS332 Hazardous Chemicals Procedure

| # | 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 <u>should not</u> contain MIXED DG symbols and GHS symbols |
|---|------------------------------|--|--|---|--|---|
| 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 flammable 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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| # | 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 <u>should not</u> contain MIXED DG symbols and GHS symbols |
|----|--|--|---|---|-----------------------------|---|
| 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 |

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| # | 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 (<i>name organs</i>) 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 | Causes damage to organs (<i>name</i>) through prolonged or repeated exposure |  | Danger | None |
| | | Category 2 | May cause damage to organs through prolonged or repeated exposure | | Warning | |
| 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

| # | 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 | Toxic to aquatic life | No Pictogram | None | None |
| | | Category 3 | Harmful to aquatic life | No Pictogram | None | None |
| 2 | Aquatic Toxicity Chronic | Category 1 | Very toxic to aquatic life with long lasting effects |  | Warning No signal word | None |
| | | Category 2 | Toxic to aquatic life with long lasting effects | | | |
| | | 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 suppress 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 inhalation also are corrosive by inhalation |