



GHS precautionary statements

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) is an internationally agreed-upon standard managed by the United Nations that was set up to replace the assortment of hazardous material classification and labeling schemes previously used around the world. Core elements of the GHS include standardized hazard testing criteria, universal warning pictograms, and harmonized safety data sheets which provide users of dangerous goods with a host of information. The system acts as a complement to the UN Numbered system of regulated hazardous material transport. Implementation is managed through the UN Secretariat. Although adoption has taken time, as of 2017, the system has been enacted to significant extents in most major countries of the world. This includes the European Union, which has implemented the United Nations' GHS into EU law as the CLP Regulation, and United States Occupational Safety and Health Administration standards.

The key elements for the labeling of containers under the GHS includes:

- an identification of the product
- one or more hazard pictograms (where necessary)
- a signal word – either Danger or Warning – where necessary
- hazard statements, indicating the nature and degree of the risks posed by the product
- precautionary statements, indicating how the product should be handled to minimize risks to the user (as well as to other people and the general environment)
- the identity of the supplier (who might be a manufacturer or importer)

Precautionary statements form part of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). They are intended to form a set of standardized phrases giving advice about the correct handling of chemical substances and mixtures.

Each precautionary statement is designated a code, starting with the letter P and followed by three digits. Statements which correspond to related hazards are grouped together by code number, so the numbering is not consecutive. The code is used for reference purposes, for example to help with translations, but it is the *actual phrase* which should appear on labels and safety data sheets. Some precautionary phrases are combinations, indicated by a plus sign "+". In several cases, there is a choice of wording, for example "Avoid breathing dust/fume/gas/mist/vapors/spray": the supplier or regulatory agency should choose the appropriate wording for the product concerned.

General precautionary statements

Note: "... " = to be specified

- P101: If medical advice is needed, have product container or label at hand.
- P102: Keep out of reach of children.
- P103: Read label before use.

Prevention precautionary statements

- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211: Do not spray on an open flame or other ignition source.
- P220: Keep/Store away from clothing/.../combustible materials.
- P221: Take any precaution to avoid mixing with combustibles.
- P222: Do not allow contact with air.
- P223: Do not allow contact with water.
- P230: Keep wetted with ...
- P231: Handle and store contents under inert gas/...
- P231+P232: Handle and store contents under inert gas. Protect from moisture
- P232: Protect from moisture.
- P233: Keep container tightly closed.
- P234: Keep only in original container/packaging.
- P235: Keep cool.
- P235+P410: Keep cool. Protect from sunlight.
- P240: Ground and bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/light/.../equipment.
- P242: Use only non-sparking tools.
- P243: Take action to prevent static discharges.
- P244: Keep valves and fittings free from grease and oil
- P250: Do not subject to grinding/shock/.../friction.
- P251: Pressurized container – Do not pierce or burn, even after use.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P262: Do not get in eyes, on skin, or on clothing.
- P263: Avoid contact during pregnancy and while nursing.
- P264: Wash ... thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P273: Avoid release to the environment.



- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P281: Use personal protective equipment as required.
- P282: Wear cold insulating gloves and either face shield or eye protection.
- P283: Wear fire resistant or flame retardant clothing.
- P284: Wear respiratory protection.
- P285: In case of inadequate ventilation wear respiratory protection.

Response precautionary statements

- P301: **IF SWALLOWED:**
- P301+P310: **IF SWALLOWED:** Immediately call a POISON CENTER or doctor/physician.
- P301+P312: **IF SWALLOWED:** Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331: **IF SWALLOWED:** Rinse mouth. Do NOT induce vomiting.
- P302: **IF ON SKIN:**
- P302+P334: **IF ON SKIN:** Immerse in cool water or wrap in wet bandages.
- P302+P350: **IF ON SKIN:** Gently wash with soap and water.
- P302+P352: **IF ON SKIN:** Wash with soap and water.
- P303: **IF ON SKIN (or hair):**
- P303+P361+P353: **IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P304: **IF INHALED:**
- P304+P312: **IF INHALED:** Call a POISON CENTER or doctor/physician if you feel unwell.
- P304+P340: **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P304+P341: **IF INHALED:** If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305: **IF IN EYES:**
- P305+P351+P338: **IF IN EYES:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P306: **IF ON CLOTHING:**
- P306+P360: **IF ON CLOTHING:** Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
- P307: **IF exposed:**
- P307+P311: **IF exposed:** Call a POISON CENTER or doctor/physician.
- P308: **IF exposed or concerned:**
- P308+P311: **IF exposed or concerned:** Call a POISON CENTER or doctor/physician.
- P308+P313: **IF exposed or concerned:** Get medical advice/attention.
- P309: **IF exposed or you feel unwell:**

- P309+P311: IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P311: Call a POISON CENTER or doctor/physician.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P313: Get medical advice/attention.
- P314: Get Medical advice/attention if you feel unwell.
- P315: Get immediate medical advice/attention.
- P320: Specific treatment is urgent (see ... on this label).
- P321: Specific treatment (see ... on this label).
- P322: Specific measures (see ... on this label).
- P330: Rinse mouth.
- P331: Do NOT induce vomiting.
- P332: If skin irritation occurs:
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P333: If skin irritation or a rash occurs:
- P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.
- P334: Immerse in cool water [or wrap in wet bandages].
- P335: Brush off loose particles from skin.
- P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
- P336: Thaw frosted parts with lukewarm water. Do not rub affected areas.
- P337: If eye irritation persists:
- P337+P313: Get medical advice/attention.
- P338: Remove contact lenses if present and easy to do. Continue rinsing.
- P340: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P341: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P342: If experiencing respiratory symptoms:
- P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- P350: Gently wash with soap and water.
- P351: Rinse cautiously with water for several minutes.
- P352: Wash with plenty of water.
- P353: Rinse skin with water [or shower].
- P360: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
- P361: Remove/Take off immediately all contaminated clothing.
- P361+P364: Take off immediately all contaminated clothing and wash it before reuse.
- P362: Take off contaminated clothing.
- P362+P364: Take off contaminated clothing and wash it before reuse.
- P363: Wash contaminated clothing before reuse.

- P364: And wash it before reuse.
- P370: In case of fire:
- P370+P376: In case of fire: Stop leak if safe to do so.
- P370+P378: In case of fire: Use ... to extinguish.
- P370+P380: In case of fire: Evacuate area.
- P370+P380+P375: In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
- P371: In case of major fire and large quantities:
- P371+P380+P375: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
- P372: Explosion risk.
- P373: DO NOT fight fire when fire reaches explosives.
- P374: Fight fire with normal precautions from a reasonable distance.
- P375: Fight fire remotely due to the risk of explosion.
- P376: Stop leak if safe to do so.
- P377: Leaking gas fire – do not extinguish unless leak can be stopped safely.
- P378: Use ... to extinguish.
- P380: Evacuate area.
- P381: In case of leakage, eliminate all ignition sources.
- P391: Collect spillage.

Storage precautionary statements

- P401: Store in accordance with ...
- P402: Store in a dry place.
- P402+P404: Store in a dry place. Store in a closed container.
- P403: Store in a well ventilated place.
- P403+P233: Store in a well ventilated place. Keep container tightly closed.
- P403+P235: Store in a well ventilated place. Keep cool.
- P404: Store in a closed container.
- P405: Store locked up.
- P406: Store in a corrosive resistant/... container with a resistant inner liner.
- P407: Maintain air gap between stacks or pallets.
- P410: Protect from sunlight.
- P410+P403: Protect from sunlight. Store in a well ventilated place.
- P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- P411: Store at temperatures not exceeding ... °C/... °F.
- P411+P235: Store at temperatures not exceeding ... °C/... °F. Keep cool.
- P412: Do not expose to temperatures exceeding 50 °C/122 °F.
- P413: Store bulk masses greater than ... kg/... lbs at temperatures not exceeding ... °C/... °F.
- P420: Store separately/away from other materials.



- P422: Store contents under ...

Disposal precautionary statements

- P501: Dispose of contents/container to ...
- P502: Refer to manufacturer or supplier for information on recovery or recycling.