

How to Work Safely with

How to Work Safely with - Hazardous Products using the "Skull and Crossbones" Pictogram

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What does this pictogram mean?



The symbol within the pictogram is a human skull with two crossed bones behind it. The symbol indicates that hazardous products with this pictogram can cause death or poisoning.

Hazardous products with this pictogram can be safely worked with if proper storage and handling practices are followed.

Which hazard classes use the skull and crossbones pictogram?

Only one WHMIS 2015 hazard class uses the skull and crossbones pictogram – Acute toxicity. This hazard class is different than other hazard classes because it individually considers each applicable route of exposure - oral (swallowed or ingested), dermal (skin contact) and inhalation (breathing).

There are 4 categories in the Acute toxicity hazard class, but the skull and crossbones pictogram is only assigned to 3 categories for each route of exposure:

- Acute toxicity (Oral) – Category 1, Category 2, and Category 3
- Acute toxicity (Dermal) – Category 1, Category 2, and Category 3
- Acute toxicity (Inhalation) – Category 1, Category 2, and Category 3

The exclamation mark pictogram is assigned to Category 4 for each route of exposure.

What are the hazards of products that have the skull and crossbones pictogram?

Acute toxicity refers to effects occurring:

- following skin contact or ingestion of a single dose of a substance, or multiple doses given within 24 hours, or
- an inhalation exposure of 4 hours.

Acute toxicity can result from exposure to the product itself, or to a product that, upon contact with water, releases a gaseous substance that is able to cause acute toxicity.

What signal words and hazard statements are used?

The WHMIS 2015 signal words and hazard statements for the hazard classes and categories assigned the skull and crossbones pictogram are:

Hazard Class and Category	Signal Word	Hazard Statement
Acute toxicity (Oral) – Category 1 and Category 2	Danger	Fatal if swallowed.
Acute toxicity (Oral) – Category 3	Danger	Toxic if swallowed.
Acute toxicity (Dermal) – Category 1 and Category 2	Danger	Fatal in contact with skin.
Acute toxicity (Dermal) – Category 3	Danger	Toxic in contact with skin.
Acute toxicity (Inhalation) – Category 1 and Category 2	Danger	Fatal if inhaled.
Acute toxicity (Inhalation) – Category 3	Danger	Toxic if inhaled.

A supplementary hazard statement is required if the product, upon contact with water, releases a gas that can cause acute toxicity. In this situation, the required statement for a gas that is:

- Acute toxicity (Inhalation) – Category 1 or 2 is “In contact with water, releases gases which are fatal if inhaled.”
- Acute toxicity (Inhalation) – Category 3 is “In contact with water, releases gases which are toxic if inhaled.”

Are there other hazards associated with products with the skull and crossbones pictogram?

In addition to the specific hazards identified by the skull and crossbones pictogram, it is important to remember that the product may have other hazards, for example:

- other **health hazards** such as skin corrosion or irritation, carcinogenicity, and/or specific target organ toxicity (single or repeated).
- **physical hazards** such as corrosive to metals, flammability or reactivity.

ALWAYS check the Safety Data Sheet (SDS) and label for the product that you are working with to make sure that you know what is being used and all of the hazards associated with the product. Ask questions if you are not sure.

How can products with the skull and crossbones pictogram be handled safely?

- ALWAYS Check the SDS for information about ALL of the hazards and the necessary precautions for the product being used. Ask questions if you are not sure.
- If it is not possible to eliminate the use of an Acute toxicity product, evaluate whether it is possible to use a [substitute](#), such as a less hazardous product (e.g., products that are classified for Acute toxicity - Category 3 or 4 are less hazardous than those classified for Acute toxicity - Category 1 or 2).
- Follow the safe work practices specified on the SDS and by your employer.
- Always work with the smallest amount possible.
- Inspect containers for damage or leaks before handling. Open containers slowly and carefully to prevent spills and dispersal into the air.
- Keep containers tightly closed when not in use.
- Avoid generating or releasing vapour, mist, dust or gas into the workplace air. Prevent any uncontrolled release of the product.
- Avoid dry sweeping of solid product. Use a pre-wetting technique or vacuum equipped with high efficiency (HEPA) filter(s) instead.
- For inhalation hazards, do not breathe dust, fume, mist, vapours or spray. Use only outdoors or in a [well-ventilated](#) area. In case of inadequate ventilation, wear respiratory protection.
- For oral and dermal hazards, wash hands thoroughly after handling. Do not eat, drink, or smoke when using these products.
- For dermal hazards, do not get in eyes, on skin, or on clothing. Wear protective gloves, protective clothing, if required.
- Personal protective equipment (PPE) may include respiratory protection, goggles, a face shield, and chemical protective clothing such as gloves and an apron made from materials that protect against the Acute toxicity product.
- Know the typical symptoms of exposure and appropriate first aid procedures. Immediately report any signs of illness to your supervisor.
- Sometimes you should not work alone with an Acute toxicity product.
- Remove contaminated clothing and protective equipment before entering eating areas or leaving the work area.
- Practice good housekeeping (e.g., keep surfaces clean, do not allow dust to accumulate).
- Immediately report spills, leaks or problems with hazard control measures.
- Inform maintenance personnel about the hazards of products to which they might be exposed.

How can products with skull and crossbones pictogram be stored safely?

- Be aware of any other special storage conditions. Read the SDS for information.
- For inhalation hazards, store in a well-ventilated place. Keep container tightly closed.
- Store in a cool, dry area, away from direct sunlight and exit paths. Post warning signs.
- Store locked up, if required.
- Avoid storing large quantities if possible. Do not stockpile.
- Inspect containers and storage area regularly for signs of leaks or damage. Contain spills or leaks by storing product containers in trays made from compatible materials.
- Empty containers may contain hazardous residue. Store separately. Keep closed.
- Store containers at a convenient height for handling, below eye level if possible. High shelving increases the risk of dropping containers and the severity of container damage, personal injury and/or exposure if a fall occurs.
- Ensure that appropriate fire-fighting and spill clean-up equipment is readily available.
- Follow all applicable health and safety regulations, fire and building codes.

What should I do in case of an emergency?

Understand and practice emergency procedures so that you know what to do if it becomes necessary.

- Ensure that eyewash and emergency shower are readily available in the immediate work area. These devices must be tested regularly.
- In the event of a spill or leak, immediately put on an escape-type respirator, if required, and exit the area.
- Immediately report ventilation failures, leaks or spills to your supervisor.
- Have spill control procedures and equipment ready (e.g., absorbent spill control materials, PPE etc.).
- Immediately report leaks to your supervisor, warn people in the area, and move to a safe location, if necessary.
- Ensure that appropriate medical response is available (e.g., antidotes, copy of SDS for the emergency doctor, first responders, etc.)
- IF SWALLOWED: Immediately call a Poison Centre or doctor. Specific treatment may be required. Rinse mouth.

- IF ON SKIN: Wash with plenty of water. Immediately call a Poison Centre or doctor for more severe hazards or Call a Poison Centre or doctor if you feel unwell for less severe hazards. Specific treatment may be required. Take off immediately all contaminated clothing and wash it before reuse.
 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a Poison Centre or doctor. Specific treatment is urgent.
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