

How to Work Safely with

How to Work Safely with - Hazardous Products using the "Exploding Bomb" Pictogram

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What does this pictogram mean?



The symbol within the pictogram shows an exploding bomb. Products with this pictogram present severe fire and explosion hazards. Significant injury and property damage could result from incidents involving these products.

Products with this pictogram are not commonly used because of their severe hazards. When used, they must be handled and stored in stringently controlled conditions. Specialized training and supervision are required.

NOTE: The Explosives hazard class has not been implemented in WHMIS 2015. In Canada, explosives are regulated under the *Explosives Act*. Provision of information about the hazards, and the safe handling and storage and emergency procedures for explosives is beyond the scope of this document.

Which hazard classes use the exploding bomb pictogram?

This pictogram is used for two WHMIS 2015 physical hazard classes:

- Self-reactive substances and mixtures - Type A and B*
- Organic peroxides – Type A and B*

*For these hazard classes, Type B is assigned two pictograms – the exploding bomb and the flame. Types C, D, E, and F are assigned the flame pictogram. Refer to [How to Work Safely with - Hazardous Products Using the "Flame" Pictogram](#) for information on Types C, D, E and F of these hazard classes.

The Explosives hazard class has not been implemented in WHMIS 2015. However, you may see this hazard class identified on a safety data sheet or label. The Explosives hazard class is also assigned the exploding bomb pictogram and has the following categories:

- Unstable explosive
- Division 1.1 (mass explosion hazard)
- Division 1.2 (severe projection hazard)
- Division 1.3 (fire, blast or projection hazard)
- Division 1.4 (fire or projection hazard)
- Division 1.5 (may mass explode in fire)

What are the hazards of products that have the exploding bomb pictogram?

Self-reactive substances and mixtures are sensitive to temperature and temperature changes. Heating (even slight heating), such as heating that may occur through improper handling or storage conditions, could result in a very hazardous situation.

Organic peroxides are highly reactive, and tend to ignite easily and burn rapidly. Organic peroxides are very unstable and are generally sensitive to light (e.g., have to be stored in darkness). Some are sensitive to temperature changes or friction (e.g., shaking or bumping of the container). Organic peroxides tend to react explosively with metals.

The WHMIS 2015 signal words and hazard statements for hazardous products with the exploding bomb pictogram are:

Hazard Class and Category	Signal Word	Hazard Statement
Self-reactive substances and mixtures – Type A	Danger	Heating may cause an explosion
Self-reactive substances and mixtures – Type B	Danger	Heating may cause a fire or explosion
Organic peroxides – Type A	Danger	Heating may cause an explosion
Organic peroxides – Type B	Danger	Heating may cause a fire or explosion

Are there other hazards associated with products that have the exploding bomb?

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

- health hazards such as acute toxicity, skin corrosion or irritation, carcinogenicity or specific target organ toxicity – repeated or single exposure.
- other physical hazards such as corrosive to metals

These products may also be highly reactive with many other materials – check Section 10 (Stability and Reactivity) of the Safety Data Sheet (SDS) for incompatible materials.

How can products with the exploding bomb 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 use of the hazardous product in your workplace, evaluate whether it is possible to [substitute](#) it with a less hazardous product.
- Get special instructions before use and strictly follow all instructions specified by the supplier.
- Keep away from heat, hot surfaces, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials.
- Keep only in original packaging.
- Keep cool.

- Ground and bond container and receiving equipment.
- Wear protective gloves, protective clothing, eye protection and/or face protection, if required.
- If personal protective equipment is required, workers must be thoroughly trained in its selection, fit, use and maintenance.
- Never return unused product to the original container, even if it does not appear to be contaminated.
- Keep containers tightly closed when not in use, unless the supplier instructs otherwise.
- Do not reuse empty containers as they may contain hazardous residue.
- Do not use product if physical characteristics and appearance do not match the SDS or if the product is of unknown age.
- Avoid spilling product. Immediately report leaks, spills or failures of the safety equipment (e.g., ventilation system). In the event of a spill or leak, exit the area immediately.
- Keep work areas clean and tidy. Wipe up spills and keep surfaces clean to prevent contact with skin or incompatibles. Prevent accumulation of dust or other residues on ledges or other surfaces.
- Do not smoke, eat or drink in work areas. Wash hands thoroughly after handling. Wash hands before eating, drinking, smoking, or going to the toilet.
- Inform maintenance personnel of the product hazards, and any special procedures and precautions needed before work begins.

How can products with the exploding bomb pictogram be stored safely?

- Follow all special instructions for storage provided on the SDS (e.g., maximum quantities and recommended temperature conditions) or specified by the supplier.
- Store product in containers that the supplier recommends. Normally these are the same containers in which the product was shipped.
- Store away from incompatible materials as listed on the SDS.
- Consider the use of alarms that warn of temperatures higher or lower than recommended.
- Consider the use of leak detection systems.
- Store in a well-ventilated place.
- Store separately.

- Store in a cool, dry area away from direct sunlight and exit paths. Post warning signs.
 - Avoid storing large quantities, if possible.
 - Avoid prolonged storage. Label containers with date opened and disposal date.
 - Inspect storage area and containers for signs of leakage or damage regularly.
 - Empty containers may contain hazardous residue. Store separately. Keep closed.
 - Ensure that appropriate fire-fighting and spill clean-up equipment is readily available.
 - Follow all applicable health and safety regulations, fire and building codes.
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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 appropriate fire extinguishers are available for use.
 - Be aware of at least two different exit paths in the event of fire.
 - Have spill control procedures and equipment ready (e.g., absorbent spill control materials, personal protective equipment, non-sparking tools, etc.).
 - Immediately report leaks to your supervisor, warn people in the area, and move to a safe location.
 - For Type A products, there is an explosion risk in case of fire. Evacuate area. DO NOT fight fire when fire reaches explosives.
 - For Type B products, evacuate area in case of fire. Fight fire remotely due to the risk of explosion. Use fire extinguishing media specified by the supplier to extinguish the fire.
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