



WHMIS Quick Facts

Workplace Hazardous Materials Information System



Very Toxic and Toxic Materials

Immediate and Serious Toxic Effects

Examples of **Very Toxic Materials** include: toluene diisocyanate (TDI), carbon monoxide, chlorine, and hydrogen sulfide. Examples of **Toxic Materials** include: methylene chloride and methanol.

WHMIS Division D1 includes materials commonly thought of as “poisons”. These materials can cause death from a single dose or a brief exposure. Substances are classified as **Very Toxic** or **Toxic** using information from acute lethality tests involving inhalation, skin application, or ingestion by laboratory animals. Many chemicals have different toxicity by the different routes of exposure.



D1A - Very Toxic
D1B Toxic

Hazards of Very Toxic and Toxic Materials

Very Toxic – Immediate and Serious – these materials can cause toxic effects following exposure to extremely small amounts; for example, skin contact with about 1 gram of sodium cyanide or brief inhalation exposure to 10 ppm (parts per million) phosgene.

Toxic – Immediate and Serious – These materials can cause toxic effects following exposure to small amounts; for example, skin contact with approximately 50 grams of phenol or inhalation exposure to 1500 ppm chloroform.

Very Toxic and Toxic Materials cause serious health effects by damaging critical body systems. These systems include the lungs (chlorine, phosgene), nervous system (organophosphates), oxygen transport in the blood (carbon monoxide), and kidneys (phenol). The harmful effect may develop during exposure, or may be delayed. For example, the signs and symptoms of lung injury may not appear until 24-48 hours after exposure.

Working Safely with Very Toxic and Toxic Materials

- AVOID using Very Toxic materials.
- SUBSTITUTE less hazardous materials or processes, when practical.
- USE the smallest quantity possible.

UNDERSTAND **all of the hazards** associated with the material, including additional health concerns (e.g. long-term health effects or irritation), reactivity and flammability.

KNOW how to use the material safely and be able to protect yourself and your co-workers.

FOLLOW work practices specified by your employer. Your employer must provide specific training on how to work safely with these materials at your worksite.

MAKE SURE that engineering controls (e.g. ventilation) are operating. Closed handling systems may be necessary to prevent the release of the material (dust, mist, vapour, gas) into the workplace.

USE only in well-ventilated areas.

WEAR the appropriate personal protective equipment that your employer specifies for the job. This equipment may include respiratory protection, goggles, face shield, and chemical protective clothing, such as an apron and gloves made from materials that protect against the chemicals being handled.

BE AWARE of the typical symptoms of an overexposure and appropriate first aid procedures. Any signs of illness should be reported immediately to your supervisor.

UNDERSTAND and PRACTICE emergency procedures so that you know what to do in case of a spill or other emergency.

REPORT ventilation failures, leaks or spills to your supervisor immediately.

***In the event of an emergency...
Warn people in the area and move to a safe
location to call for emergency help.***

H46-2/04-377E ISBN 0-662-38546-2
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