

DIMETHYL SULFOXIDE (DMSO)

Hazard Description

Dimethyl Sulfoxide (DMSO) is a widely used laboratory solvent identified by WHMIS as a combustible liquid. It is considered non-toxic and can easily penetrate the skin. For this reason, it has been used to help the absorption of medicines and other compounds into the body. Unfortunately, DMSO can have the same effect on other toxic compounds it is mixed with.

Prior to Working with DMSO

- Complete a research-specific laboratory risk assessment. If DMSO is mixed with toxic substances, ensure this addressed in the Hazardous Conditions section of the risk assessment.
- Ensure that all required materials are available in case of a spill or emergency, and for waste collection.

Handling

- Complete a research-specific laboratory risk assessment. If DMSO is mixed with toxic substances, ensure this is addressed in the Hazardous Conditions section of the risk assessment.
- DMSO should be used wearing Butyl gloves as dimethyl sulfoxide easily penetrates nitrile gloves.
- Keep DMSO away from heat and other ignition sources as it is a combustible liquid.

Emergency Procedures

Always review the SDS of the purchased product for manufacturer-specific recommendations. Look at SDS for other modes of exposure. When DMSO is used as part of a mixture, review the SDSs for the other materials included in the mixture as well.

Contacts

Emergency: 911

UW Special Constables: 519-888-4911 or ext. 22222

Poison Control: 1-800-268-9017

Whenever 911 is called, if possible, UW Special Constables should also be informed to make them aware of the emergency on campus and allow them to support as needed. Ask them to meet the paramedics and direct them to the incident location.

Inhalation	▪ Remove the individual from the contaminated area to fresh air.
Skin Contact	▪ Remove contaminated clothing and quickly but gently wipe material off skin ▪ Flush with water
Eye Contact	▪ Flush eyes using an eyewash station for a minimum of 15 minutes. Remove contact lenses.

Storage

DMSO should be stored with other combustible or flammable liquids. Ideally in a flammables cabinet. Review the storage guidelines on the [chemical safety website](#) for more information on flammable cabinets.

Hazardous Waste

- Must be disposed of as per the [University's Hazardous Waste Standard](#).
- DMSO can be disposed of with other organic solvents. If DMSO is being mixed with materials other than solvents or water (i.e. inorganic acids) during a research process, complete a laboratory risk assessment then contact esf@uwaterloo.ca for disposal instructions.