

MSDS / SDS Safety Requirements – What They Mean Delivered:

Gander , March 23, 2016



Limitations

- Due to time restrictions this presentation will not cover engineering controls and respiratory protection equipment requirements.
- Engineering controls and/or respiratory personal protective equipment can be critical to ensuring worker safety for some commonly used water treatment chemicals!
- Please review MSDS or SDS to identify all safety requirements relating to a given chemical.
- What an MSDS or SDS identifies as needed for worker safety can be viewed as legislative requirements!

WHMIS Requirements

An Employer shall:

- Ensure chemicals have proper labels (supplier or workplace labels)
- Compile and maintain a current chemical inventory
- Obtain SDS/MSDS and ensure they are readily accessible and organized to enable quick reference
- Provide generic WHMIS instruction/education
- Provide chemical/work specific chemical safety training
- Ensure chemicals are safely handled, used and stored per MSDS/SDS stipulations

Chemical Safety Training

- Can be provided in house by an experienced and competent worker or supervisor
- Shall ensure workers are proficient in:
 - The dangers of a product
 - How to safely store a product
 - How to safely handle and use a product
 - What to do in the event of an emergency involving a chemical, especially a worker exposure

Note: Training on how to properly use and maintain equipment and personal protective equipment (PPE) needed to protect against chemical hazards should be linked to chemical safety training.

Legislative Requirements – Emergency Wash

“Section 42: (11) Where workers may be exposed to contact with chemicals harmful to the skin, facilities shall be available for the worker to effectively cleanse the contaminated body areas, including, where corrosive chemicals are involved, emergency water baths, showers, jump tanks, eyewash facilities or other effective means of treatment.”

Legislative Requirements – Emergency Wash

“Section 63. An employer shall ensure that

- (a) appropriate emergency washing facilities are provided in a work area where a worker's eyes or skin may be exposed to harmful or corrosive materials or other materials which may burn or irritate;
- (b) only a potable water supply is used in a plumbed emergency eyewash facility and that only potable water or an isotonic saline flushing solution is used in a portable (non-plumbed) eyewash unit;
- (c) access to emergency eyewash and shower facilities is not blocked by material or equipment; and
- (d) selection of emergency washing facilities is based upon an assessment of the risks present in the workplace.”

What satisfies the requirement?

- An emergency eye wash device and/or emergency body wash device whose manufacturer documents it meets ANSI/ISEA Z358.1
“Emergency Eyewash and Shower Equipment”
- Emergency wash devices shall also be properly located, installed and maintained per applicable guidelines, including the manufacturer’s, to meet the emergency wash device requirements and Z358.1
- Such devices shall provide flushing fluids of the required pressure, temperature and for the needed duration. For plumbed devices this normally necessitates the installation of a thermostatic mixing valve recommended by the manufacturer for a specific emergency device.

Legislative Requirements – PPE

A supervisor shall:

“5.2. (c) ensure that a worker under his or her supervision uses or wears protective equipment, devices or other apparel that this Act, the regulations or the worker’s employer requires to be used or worn.”

A worker:

“7.(a.1) shall use devices and equipment provided for his or her protection in accordance with the instructions for use and training provided with respect to the devices and equipment;”

Legislative Requirements – PPE

“71. Personal protective equipment shall

- (a) be selected and used in accordance with recognized standards and provide effective protection;
- (b) not in itself create a hazard to the wearer;
- (c) be compatible so that one item of personal protective equipment does not make another item ineffective; and
- (d) be maintained in good working order and in sanitary condition.”

Legislative Requirements – PPE

“75. Where a worker handles or is exposed to materials or conditions that are likely to injure or irritate the eye or face, an employer shall ensure that he or she wears properly fitting face and eye protection appropriate to the conditions of the workplace and in accordance with the requirements of CSA Standard CAN/CSA Z94.3 "Industrial Eye and Face Protectors".”

“78. Where there is a danger of injury, contamination or infection to a worker's skin, hands, feet or body, the worker shall wear properly fitting protective equipment appropriate to the work being done and the hazards involved.”

How are gloves selected?

Steps:

1. Review the MSDS/SDS to identify glove needs,
2. Evaluate gloves that are the right type of material based on what is specified e.g. neoprene, butyl rubber, nitrile etc.,
3. Compare a particular glove's permeation and penetration test data to the ingredients listed on the MSDS/SDS, AND
4. Confirm for a specific glove that the intended use is acceptable given what the manufacturer's use guidelines stipulate.

Note: If a glove has not been tested for a given chemical it can not be assumed that the glove will protect against it! No glove is good for all chemicals!

WHMIS 1988 Symbols & 2015 Pictograms

WHMIS Hazard Symbols vs. GHS Pictograms



Supplier Labels

Agrium

Anhydrous Ammonia, Fertilizer Grade 82-0-0

Anhydrous Ammonia
82-0-0
Agricultural Grade
GUARANTEED ANALYSIS
Total Nitrogen (N) 82.0%
82.0% Ammoniacal Nitrogen

Derived From: Anhydrous Ammonia

Directions for use. Use in accordance with recommendations of a qualified individual or institution, such as, but not limited to, a certified crop advisor, agronomist, university crop extension publication, or apply according to recommendations in your approved nutrient management plan.

Danger

Flammable gas. Contains refrigerated gas; may cause cryogenic burns or injury. Toxic if inhaled. Causes severe skin burns and eye damage.

Wear cold insulating gloves and face shield. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use only outdoors or in a well-ventilated area. Avoid breathing gas.

FIRST AID: Immediately call a POISON CENTER or physician.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water or shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Store locked up in a well ventilated place.

Dispose of contents and container in accordance with all local, regional, national and international regulations.

See Safety Data Sheet for further details regarding the safe use of this product.

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Key Indicators for Emergency Wash Device Needs

Indicators of a possible need:

- Corrosive symbol or pictogram
- Signal word “Danger” on Supplier Label and/or SDS
- Hazards Identification section documents “corrosive” or “severely corrosive”

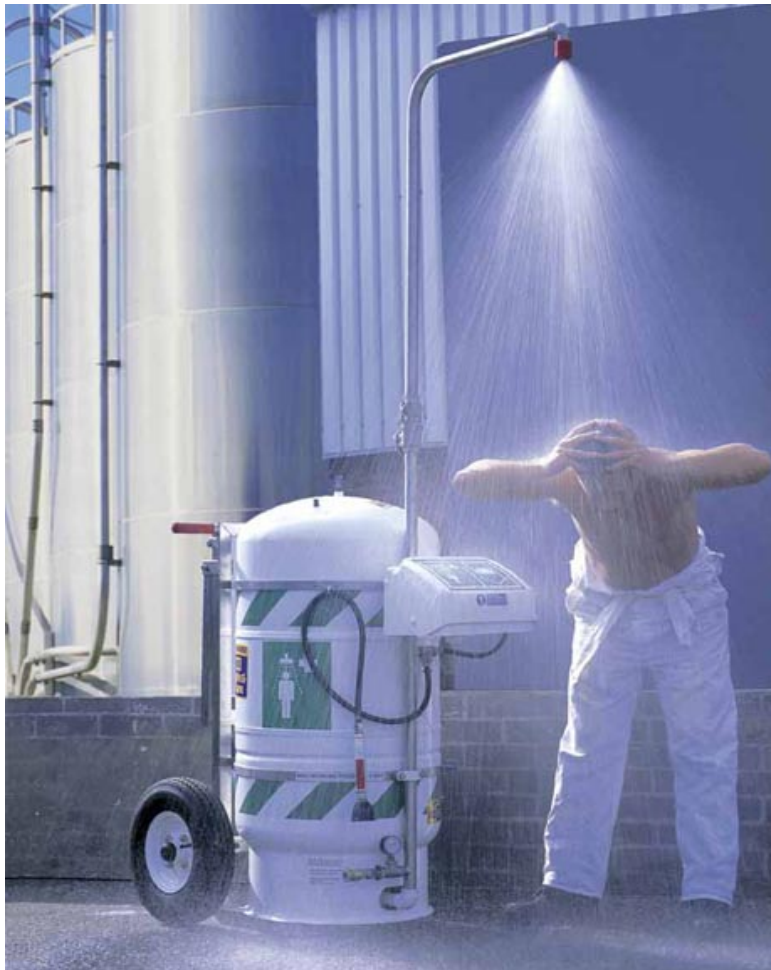
Key Indicators for Emergency Wash Device Needs

Indicators of a requirement:

- First Aid section guidance indicating a need to flush the eyes for more than 15 minutes means an emergency eye wash is required
- First Aid section guidance indicating a need to flush/wash the body for more than 15 minutes indicates an emergency body wash is required
- Exposure Controls section states that safety shower, body wash or eye wash are needed signals the device(s) in question is/are required

Note: In the first aid section look for a stated flushing duration of 20, 25, 30, 40, 45 or 60 minutes as these mean an emergency device is required.

Emergency Shower



Plumbed Emergency Eye Wash



Self Contained Emergency Eye Wash



Combination Emergency Eye Wash and Shower



Thermostatic Mixing Valve



Emergency Wash Trailers



Emergency Wash Trailer



Questions?