

MATERIAL SAFETY DATA SHEET

Formic Acid

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STATEMENT OF HAZARDOUS NATURE

Hazardous according to criteria of Worksafe Australia

COMPANY DETAILS

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IDENTIFICATION SECTION

Product Name	Formic Acid
Other Names	
Product Code	C350
U.N. Number	UN1779
Dangerous Goods Class and Subsidiary Risk	8
Hazchem Code	2R
Poison Schedule	None allocated
Use	Chemical reagent

Physical Description and Properties

Appearance	Colourless, liquid, pungent odour
Boiling Point/Melting Point	BP 101°C, MP 8°C
Vapour Pressure	23mm Hg
Specific Gravity	1.21
Flash Point	50oC
Flammability Limits	Upper : 57%, Lower : 18%
Solubility in water	Complete

Other Properties

Ingredients

Chemical Name	CAS Number	Proportion
HCOOH	64-18-6	100%

HEALTH HAZARD INFORMATION

Health Effects:

Acute

- Swallowed:** May cause acute local tissue damage, with other effects ranging from nausea and dizziness to unconsciousness.
- Eye:** May cause severe irritation or burns.
- Skin:** May cause severe irritation or burns.
- Inhaled:** May cause severe irritation to the respiratory system. May cause coughing, chest pains, nausea and vomiting.
- Chronic:** Prolonged vapour exposure may produce conjunctivitis of the eyes and irritation and dermatitis of the skin.

First Aid:

- Swallowed:** DO NOT induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention.
- Serious Ingestion:** DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged a possible indication that the toxic material was ingested, the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing perform mouth-to-mouth resuscitation. Seek immediate attention.
- Eye:** Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.
- Skin:** If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands. Neutralize exposed skin with a dilute solution of sodium carbonate. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used if irritation persists, seek medical attention. Wash contaminated clothing before reusing. **Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
- Inhaled:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention. **Serious Inhalation:** Evacuate the victim to a safe as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
- First Aid Facilities:** Eye bath , safety shower
- Advice to Doctor** No specific antidote. Treat symptomatically and supportively

PRECAUTIONS FOR USE

- Exposure Standards:** TLV/TWA : 9mg/m3 5ppm
- Engineering Controls:** Use general or local exhaust ventilation to meet TLV requirements.
- Personal Protection:** Wear safety goggles and face shield, uniform, protective suit, acid-resistant gloves are recommended. Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 100 ppm, a chemical cartridge respirator with organic vapour cartridge and dust/mist filter is recommended. Above this level, a self-contained breathing apparatus is recommended.
- Flammability:** Use in well ventilated area

SAFE HANDLING INFORMATION

- Storage and Transport:** Keep container tightly closed. Store in a cool, dry, well-ventilated, flammable liquid storage area or cabinet. Bond and ground containers when transferring liquid.
- Spills and Disposal:** Wear self-contained breathing apparatus and full protective clothing. Shut off ignition sources; No flares, smoking or flames in the area. Stop leak if you can do so without risk. Neutralise spill with soda ash or lime. With clean shovel, carefully place material into a clean, dry container and cover. Remove from spill area. Flush spill area with water. Observe all federal, state and local environmental regulations.
- Fire/Explosion Hazard:** Use water spray, alcohol foam, dry chemical or carbon dioxide. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers in fire risk area if it can be done so without risk. Use water to keep fire-exposed containers cool. Thermal decomposition products may include toxic oxides of carbon..

OTHER INFORMATION

- Incompatibilities (Materials to avoid)** Acids, aluminium, bases (strong), Furfuryl alcohol, hydrogen peroxide, nitric acid, nitromethane, oxidizers (strong), palladium-carbon catalyst, phosphorus pentaoxide, plastic, rubber, coatings, sodium hypochlorite, sulfuric acid (concentrated).
- Animal Toxicity Data:** LD50 (ORAL-RAT) 1100mg/Kg LD50 (IPR-MOUSE) 940mg/kg

The information published in this Material Safety Data Sheet has been compiled from data in various technical publications. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. We reserve the right to revise material Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.