TNJ®

Specialized in chemicals

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Material Safety Data Sheet

Methanesulfonic Acid

Section 1: Chemical Product and Company Identification

Molecular formula: CH4O3S

CAS Nr: 75-75-2

EINECS: 200-898-6

Molecular weight: 96.11

Synonyms: Sulphonethane; MSA; Methane Sulfonic Acid; Methylsulphonicacid

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	Percent	Hazardous
Methanesulfonic Acid	75-75-2	99% min	Yes

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

Appearance: Colorless to brown oily liquid.

DANGER! CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. VAPOR IS SEVERELY IRRITATING TO EYES AND RESPIRATORY TRACT.

Health Rating: 3 - Severe (Poison)

Flammability Rating: 1 - Slight

Reactivity Rating: 1 - Slight

Contact Rating: 4 - Extreme (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: White (Corrosive)

Potential Health Effects

Inhalation:

Inhalation produces damaging effects on the mucous membranes and upper respiratory tract. Symptoms may include irritation of the nose and throat, and labored breathing. May cause lung edema, a medical emergency.

Ingestion:

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhea.

Skin Contact:

Corrosive. Symptoms of redness, pain, and severe burn can occur.

Eye Contact:

Corrosive! Vapors are severely irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin conditions or impaired respiratory function may be more susceptible to the effects of this substance.

Section 4: First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Section 5: Fire and Explosion Data

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece

operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

Section 7: Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Do not add water to acid while in the container because heat release may cause spattering. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

Section 8: Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the substance is apparent and engineering controls are not feasble, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9: Physical and Chemical Properties

Appearance:

Liquid at room temperature.

Odor:

Faint sulfur trioxide odor to odorless.

Solubility:

Soluble in water.

Specific Gravity:

1.5

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

167C (333F) @ 10 mm Hg

Melting Point:

20C (68F)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

Section 10: Stability and Reactivity Data

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Burning may produce carbon monoxide, carbon dioxide, sulfur oxides.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Bases, amines, strong reducing agents, ethyl vinyl ether, hydrofluoric acid and strong oxidizers.

Conditions to Avoid:

Heat, incompatibles.

Section 11: Toxicological Information

Oral rat LD50: 200 mg/kg. Investigated as a mutagen.

--------\Cancer Lists\----------

		---NTP Carcinogen---		
Ingredient		Known	Anticipated	IARC Category
Methanesulfonic Acid (75-75-2)		No	No	None
Water (7732-18-5)		No	No	None

Section 12: Ecological Information

Environmental Fate:

When released into the soil, this material may leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate

extent by dry deposition. When released into the air, this material is expected to have a half-life of greater than 30 days.

Environmental Toxicity:

No information found.

Section 13: Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S. (METHANESULFONIC ACID)

Hazard Class: 8, 6.1

UN/NA: UN2922

Packing Group: II

Information reported for product/size: 5KG

International (Water, I.M.O.)

Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S. (METHANESULFONIC ACID)

Hazard Class: 8, 6.1

UN/NA: UN2922

Packing Group: II

Information reported for product/size: 5KG

International (Air, I.C.A.O.)

Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S. (METHANESULFONIC ACID)

Hazard Class: 8, 6.1

UN/NA: UN2922

Packing Group: II

Information reported for product/size: 5KG

Section 15: Other Regulatory Information

--------\Chemical Inventory Status - Part 1\---------

Ingredient	TSCA	EC	Japan	Australia
Methanesulfonic Acid (75-75-2)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\----------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Methanesulfonic Acid (75-75-2)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\----------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Methanesulfonic Acid (75-75-2)	No	No	No	No
Water (7732-18-5)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\----------

Ingredient	-RCRA- CERCLA	261.33	-TSCA- 8(d)
Methanesulfonic Acid (75-75-2)	No	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Pure / Liquid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Section 16: Other Information

NFPA Ratings: Health: **3** Flammability: **1** Reactivity: **0**

Label Hazard Warning:

DANGER! CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. VAPOR IS SEVERELY IRRITATING TO EYES AND RESPIRATORY TRACT.

Label Precautions:

Do not breathe vapor.

Do not get in eyes, on skin, or on clothing.

Keep container closed.

Wash thoroughly after handling.

Use only with adequate ventilation.

Label First Aid:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before re-use. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an

unconscious person. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

Revision Information:

Jan. 2008.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we m be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.