



E-PURE MSA®

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
2000 Market Street
Philadelphia, Pennsylvania 19103

Thio and Fine Chemicals

Customer Service Telephone Number: (800) 628-4453
(Monday through Friday, 8:30 AM to 5:30 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (303) 623-5716
(24 hrs., 7 days a week)

Product Information

Product name: E-PURE MSA®
Synonyms: Not available
Molecular formula: CH₄SO₃
Chemical family: Alkane, sulfonic acid
Molecular weight: 96.1 g/mol
Product use: Salt former

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: Colourless to yellow.
Physical state: liquid
Odor: slight, sulphurous

DANGER!
CAUSES EYE AND SKIN BURNS.
MAY CAUSE BLINDNESS.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

Potential Health Effects

Primary routes of exposure:
Inhalation and skin contact.

Signs and symptoms of acute exposure:
Corrosive to skin and eyes. If swallowed, may cause burns to mouth, throat and digestive tract. Vapor may be severely irritating to eyes, nose, throat, and lungs. May also cause: tearing, coughing, breathing difficulties.

Skin:
No more than slightly toxic. Corrosive. (based on animal studies)

Inhalation:

Slightly toxic. (based on animal studies) Severely irritating. (vapor)

Eyes:

Corrosive. (based on animal studies)

Ingestion:

Slightly toxic. (based on animal studies)

Medical conditions aggravated by overexposure:

Respiratory disease or diminished respiratory capacity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	OSHA Hazardous
Methanesulfonic acid	75-75-2	70 %	Y
Water	7732-18-5	30 %	N

The substance(s) marked with a "Y" in the Hazard column above, are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This material is classified as hazardous under Federal OSHA regulation.

4. FIRST AID MEASURES

Inhalation:

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin:

In case of 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.

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flash point does not flash

Auto-ignition temperature: not determined

Lower flammable limit (LFL): Not determined

Upper flammable limit (UFL): Not determined

Extinguishing media (suitable):

Use extinguishing measures to suit surroundings.

Protective equipment:

This material is not flammable.

However, as in fighting any fire, fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

Material does not support combustion.

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:

Stop the leak if you can do so without risk. Evacuate area of all unnecessary personnel. Keep people away and stay on the upwind side. Ventilate the area. Wear appropriate personal protective equipment, avoid direct contact. See section 8 - Exposure control and personal protection. Clean-up methods - small spillage Pick up with inert absorbent material (if possible). Clean-up methods - large spillage Dike spillage. Collect in suitable and properly labeled containers for disposal or reclamation. Do not allow to enter soil, waterways or waste water channels. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

Handling

General information on handling:

Do not taste or swallow.

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

Avoid breathing vapor or mist.

Keep container tightly closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Emptied container retains vapor and product residue.

Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Storage

General information on storage conditions:

This material is chemically stable under specified conditions of storage, shipment and/or use.

Storage stability – Remarks:

Stable under normal conditions.

Storage incompatibility – General:

Store separate from: Bases

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Engineering controls:

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposures. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection:

Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing immediately and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Colourless to yellow.
Physical state:	liquid
Odor:	slight, sulphurous
pH:	< 0.5
Density:	1.345 - 1.360 g/cm ³ (68 °F (20 °C))
Vapor pressure:	not determined
Vapor density:	3.3 kg/m ³
Freezing point:	-76 °F (-60 °C)

Solubility in water: 68 °F (20 °C) completely soluble

% Volatiles: Non volatile

Molecular weight: 96.1 g/mol

10. STABILITY AND REACTIVITY

Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Materials to avoid:

strong bases

Conditions / hazards to avoid:

Heat.

Hazardous decomposition products:

Thermal decomposition giving toxic and corrosive products :

sulfur oxides

Carbon oxides

11. TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for Methanesulfonic acid (75-75-2)

Acute toxicity

Oral:

Slightly toxic. (rat) LD50 = 649 mg/kg.

Slightly toxic. (rat) LD50 = 1,158 mg/kg. (70 %)

Dermal:

Slightly toxic. (rabbit) LD0 = 1,000 mg/kg. (70 %)

No more than moderately toxic. (rabbit) LD50 between 200 - 2,000 mg/kg. (0 - 10 %)

Inhalation:

Slightly toxic. (rat) 6 h LC0 = 0.74 mg/l.

Skin Irritation:

Corrosive. (rabbit)

Eye Irritation:

Corrosive. (rabbit)

Skin Sensitization:

Repeated skin exposure. (guinea pig) No skin allergy was observed. (70 %)

Repeated dose toxicity

Dietary administration to rat / No adverse effects reported.

Inhalation administration to rat / affected organ(s): nose / signs: severe irritation, death / (extent of injury depends on severity of exposure)

Genotoxicity

Assessment in Vitro:

No genetic changes were observed in laboratory tests using: bacteria, animal cells

Genotoxicity

Assessment in Vivo:

No genetic changes were observed in laboratory tests using: animals

Developmental toxicity

Exposure during pregnancy. oral (rat) / No birth defects were observed.

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

Data on this material and/or its components are summarized below.

Data for Methanesulfonic acid (75-75-2)

Biodegradation:

Readily biodegradable (28 d) biodegradation 100 %

Octanol Water Partition Coefficient:

log Pow = -4.98 (Not expected to bioaccumulate.)

Ecotoxicology

Data on this material and/or its components are summarized below.

Data for Methanesulfonic acid (75-75-2)

Aquatic toxicity data:

Slightly toxic. Oncorhynchus mykiss (rainbow trout) 96 h LC50 = 73 mg/l

Aquatic invertebrates:

Moderately toxic. Daphnia magna (Water flea) 24 h EC50 = 1.7 mg/l

Algae:

Slightly toxic. Algae 72 h IC50 = 14 - 16 mg/l

Microorganisms:

Moderately toxic. Pseudomonas putida 16 h EC50 = 1.8 mg/l

Pseudomonas putida 16 h EC10 = 0.54 mg/l

Terrestrial non-mammal:

Coturnix japonica (Japanese quail) LD50 (Acute oral toxicity) = 1,000 mg/kg

Impairment of fertility Coturnix japonica (Japanese quail) (Acute oral toxicity) 421 mg/kg (males)

13. DISPOSAL CONSIDERATIONS

Waste disposal:

Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number : 3265
 Proper shipping name : Corrosive liquid, acidic, organic, n.o.s.
 Technical name : (Methane sulfonic acid)
 Class : 8
 Packaging group : II
 Marine pollutant : no

International Maritime Dangerous Goods Code (IMDG)

UN Number : 3265
 Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 Technical name : (METHANE SULPHONIC ACID)
 Class : 8
 Packaging group : II
 Marine pollutant : no

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
US. Toxic Substances Control Act	TSCA	The components of this product are all on the TSCA Inventory.
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	Conforms to
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	DSL	All components of this product are on the Canadian DSL list.
Japan. Kashin-Hou Law List	ENCS (JP)	Conforms to



Material Safety Data Sheet

E-PURE MSA ®

Korea. Toxic Chemical Control Law (TCCL) List	KECI (KR)	Conforms to
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	Conforms to
China. Inventory of Existing Chemical Substances	IECSC (CN)	Conforms to
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	NZIOC	Conforms to

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:

Acute Health Hazard

SARA Title III – Section 313 Toxic Chemicals:

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

OSHA Regulated Carcinogens (NTP, IARC, OSHA Listed):

NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC:

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

United States – State Regulations

Massachusetts Right to Know

No components are subject to the Massachusetts Right to Know Act.

New Jersey Right to Know

Chemical Name
Methanesulfonic acid

CAS-No.
75-75-2



E-PURE MSA ®

New Jersey Right to Know – Special Health Hazard Substance(s)

<u>Chemical Name</u>	<u>CAS-No.</u>
Methanesulfonic acid	75-75-2

Pennsylvania Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
Methanesulfonic acid	75-75-2
Water	7732-18-5

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

Latest Revision(s):

Revised Section(s):	Initial Entry
Reference number:	000000043319
Date of Revision:	06/24/2009
Date Printed:	06/24/2009

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