



# METHANE SULFONIC ACID, ANHYDROUS

Material Safety Data Sheet

Arkema Inc.

## 1 PRODUCT AND COMPANY IDENTIFICATION

### Thio and Fine Chemicals

Arkema Inc.  
2000 Market Street  
Philadelphia, PA 19103

### EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison Control Center  
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Customer Service	1-800-628-4453	8:30 to 5:30 EST

Product Name METHANE SULFONIC ACID, ANHYDROUS  
Product Synonym(s)

Chemical Family Alkane Sulfonic Acids

Chemical Formula CH4SO3

Chemical Name Methanesulfonic Acid

EPA Reg Num

Product Use

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
Methane sulfonic acid	75-75-2	99	Y

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

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

## 3 HAZARDS IDENTIFICATION

### Emergency Overview

Water white to pale yellow liquid, faint SO3 odor

#### DANGER!

CAUSES EYE AND SKIN BURNS. MAY CAUSE BLINDNESS.

CAUSES RESPIRATORY TRACT IRRITATION.

MAY BE HARMFUL IF SWALLOWED.

MAY BE HARMFUL IF ABSORBED THROUGH SKIN

### Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be slightly toxic if swallowed, no more than slightly toxic if absorbed through skin or inhaled, and corrosive to eyes and skin. If swallowed, this material may cause mild to severe burns to the mouth, throat and digestive tract. Vapor is severely irritating to the eyes, nose and respiratory tract and may produce tearing of the eyes, coughing and breathing difficulty. Medical conditions that may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

**4 FIRST AID MEASURES**

IN CASE OF CONTACT, immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Call a Poison Control Center. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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

**5 FIRE FIGHTING MEASURES****Fire and Explosive Properties**

Auto-Ignition Temperature	>500 C		
Flash Point	200 C	closed cup	Flash Point Method
Flammable Limits- Upper	NE		
Lower	NE		

**Extinguishing Media**

Use extinguishing media appropriate to surrounding fire conditions.

**Fire Fighting Instructions**

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 gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

**Fire and Explosion Hazards**

Material does not support combustion. See Section 10 for information on hazardous decomposition products.

**6 ACCIDENTAL RELEASE MEASURES****In Case of Spill or Leak**

Small spills: soak up with an inert absorbent. Scoop up and place in a clean, dry container. Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual materials.

Large spills: Pump into marked containers for disposal or reclamation. 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**

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

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

**7 HANDLING AND STORAGE**

Do not taste or swallow.

Do not add water to acid while in container because heat release may cause spattering.

Never use pressure to empty drum.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

**Storage**

This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage.

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION****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. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

**Eye / Face Protection**

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

**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 promptly and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash skin thoroughly after handling.

**Respiratory Protection**

Avoid breathing vapor or mist. Where airborne exposure is likely, 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. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for 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, 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.

**Airborne Exposure Guidelines for Ingredients**

The components of this product have no established Airborne Exposure Guidelines

-Only those components with exposure limits are printed in this section.

-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

Appearance/Odor	Water white to pale yellow liquid, faint SO <sub>3</sub> odor
pH	<0.5
Specific Gravity	1.477-1.480 @ 20 C
Vapor Pressure	<1 mmHg @ 20 C
Vapor Density	3.3
Melting Point	NA
Freezing Point	19 C
Boiling Point	167 C @ 13 mbar
Solubility In Water	Completely soluble @ 20 C
Solubility in Other Materials	Ethanol
Viscosity	14.5 cP @ 20 C
Molecular Weight	96.1
n-Octanol/Water Partition Coefficient	log Pow = -4.98
Other Physical Data	Refractive index: 1.4308 @ 20 C

**10 STABILITY AND REACTIVITY****Stability**

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

**Hazardous Polymerization**

Does not occur.

**Incompatibility**

Avoid contact with strong bases. Protect from heat. Avoid pouring water on this product.

**Hazardous Decomposition Products**

Thermal decomposition releases oxides of carbon and sulfur.

**11 TOXICOLOGICAL INFORMATION****Toxicological Information**

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

Single exposure (acute) studies indicate:

Oral - Slightly Toxic to Rats (LD<sub>50</sub> 649 mg/kg)

Dermal - No More than Slightly Toxic to Rabbits (LD<sub>0</sub> 1,000 mg/kg)

Inhalation - No More than Slightly Toxic to Rats (6-hr LC<sub>0</sub> 0.74 mg/l)

Eye Irritation - Corrosive to Rabbits

Skin Irritation - Corrosive to Rabbits

No skin allergy was observed in guinea pigs following repeated exposure. No adverse effects were reported in rats repeatedly exposed in the feed. Repeated exposure by inhalation produced severe signs of irritation in the noses of rats with partial recovery noted after two weeks of no exposure. At higher exposure levels, decreased body weights, clinical signs of irritation and mortality were noted. No effects were noted in the offspring of rats



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## 11 TOXICOLOGICAL INFORMATION

exposed orally during pregnancy. No genetic changes were observed in tests using bacteria, animal cells or animals.

## 12 ECOLOGICAL INFORMATION

### Ecotoxicological Information

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

This material is moderately toxic to *Daphnia magna* (24-hr EC50 1.7 mg/l). It is slightly toxic to rainbow trout (96-hr LC50 73 mg/l) and algae (72-hr IC50 14-16 mg/l), and is practically non-toxic to guppies [96-hr LC50 >770 mg/l (100%); >1,110 mg/l (70%)]. The acute oral LD50 in coturnix quail is 1,000 mg/kg. Reduced egg fertility was noted after male coturnix quail were administered a single oral dose of 421 mg/kg and evaluated for their ability to produce fertile eggs upon mating.

### Chemical Fate Information

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

This material is readily biodegradable (100% after 28-days) and is not expected to bioaccumulate (log Pow - 4.98).

## 13 DISPOSAL CONSIDERATIONS

### Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations.

## 14 TRANSPORT INFORMATION

DOT Name	Corrosive liquid, acidic, organic, n.o.s.
DOT Technical Name	(Methane Sulfonic Acid)
DOT Hazard Class	8
UN Number	3265
DOT Packing Group	PG II
RQ	No

## 15 REGULATORY INFORMATION

### Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	N
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	N

The components of this product are all on the TSCA Inventory list.

### International Inventory Memo

All ingredients of this product are listed on the following international inventories:

Australia (AICS)



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Canada (DSL)  
Europe (EINECS)  
Japan (ENCS)  
Korea (ECL)  
Philippines (PICCS)

## Ingredient Related Regulatory Information:

### SARA Reportable Quantities

Methane sulfonic acid

CERCLA RQ

SARA TPQ

NE

### New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Methane sulfonic acid

## 16 OTHER INFORMATION

### Revision Information

Revision Date 11 OCT 2004 Revision Number 6  
Supercedes Revision Dated 26-SEP-2001

### Revision Summary

ATOFINA Chemicals, Inc. has changed its name to Arkema Inc.

### Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

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