

# Material Safety Data Sheet

Methanesulfonyl fluoride, 98%

ACC# 20835

## Section 1 - Chemical Product and Company Identification

**MSDS Name:** Methanesulfonyl fluoride, 98%

**Catalog Numbers:** AC176690000, AC176690250

**Synonyms:** Methanesulphonyl fluoride; MSF.

**Company Identification:**

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01

**For emergencies in the US, call CHEMTREC:** 800-424-9300

## Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
558-25-8	Methanesulfonyl fluoride	98	209-192-2

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Appearance: clear, colorless to pale yellow liquid.

**Danger!** May be fatal if inhaled, absorbed through the skin or swallowed. Causes eye and skin burns. Causes digestive and respiratory tract burns. Water-reactive.

**Target Organs:** Eyes, skin, mucous membranes.

#### Potential Health Effects

**Eye:** Causes eye burns. Lachrymator (substance which increases the flow of tears).

**Skin:** May be fatal if absorbed through the skin. Causes skin burns. Burns caused by weak hydrofluoric acid may go unnoticed for several hours. Therefore, first aid procedures must be followed if any contact is suspected.

**Ingestion:** May be fatal if swallowed. Causes gastrointestinal tract burns.

**Inhalation:** Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

**Chronic:** Chronic inhalation and ingestion may cause chronic fluoride poisoning (fluorosis) characterized by weight loss, weakness, anemia, brittle bones, and stiff joints. Chronic exposure may cause effects similar to those of acute exposure.

## Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the

upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Destroy contaminated shoes.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cups of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Reacts with water to form acidic gases which when in contact with metal may liberate flammable hydrogen gas.

**Extinguishing Media:** Use foam, dry chemical, or carbon dioxide. DO NOT USE WATER!

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 1; Instability:; Special Hazard: -W-

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Provide ventilation. Do not expose spill to water. Evacuate unnecessary personnel. Approach spill from upwind.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing.

**Storage:** Store in a cool, dry place. Store in a tightly closed container. Keep under a nitrogen blanket. Poison room locked.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
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Methanesulfonyl fluoride	none listed	none listed	2.5 mg/m <sup>3</sup> TWA (as dust) (listed under Fluorides).
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**OSHA Vacated PELs:** Methanesulfonyl fluoride: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Section 9 - Physical and Chemical Properties**

**Physical State:** Liquid

**Appearance:** clear, colorless to pale yellow

**Odor:** pungent odor

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:**Not available.

**Viscosity:** Not available.

**Boiling Point:** 123-124 deg C @ 760 mm Hg

**Freezing/Melting Point:**Not available.

**Decomposition Temperature:**Not available.

**Solubility:** Reacts.

**Specific Gravity/Density:**1.4270

**Molecular Formula:**CH<sub>3</sub>FO<sub>2</sub>S

**Molecular Weight:**98.09

**Section 10 - Stability and Reactivity**

**Chemical Stability:** Reacts vigorously with water to form toxic hydrogen fluoride (hydrofluoric acid). If confined and wet, explosions can result.

**Conditions to Avoid:** Contact with water.

**Incompatibilities with Other Materials:** Strong bases, strong oxidizing agents, water.

**Hazardous Decomposition Products:** Carbon monoxide, oxides of sulfur, carbon dioxide, hydrogen fluoride gas.

**Hazardous Polymerization:** Has not been reported.

**Section 11 - Toxicological Information**

**RTECS#:**

**CAS#** 558-25-8: PB2975000

**LD50/LC50:**

CAS# 558-25-8:

Inhalation, rat: LC50 = 1 ppm/7H;  
Oral, rat: LD50 = 2 mg/kg;  
Skin, rabbit: LD50 = >24 mg/kg;

**Carcinogenicity:**

CAS# 558-25-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.

**Teratogenicity:** No data available.

**Reproductive Effects:** No data available.

**Mutagenicity:** No data available.

**Neurotoxicity:** No data available.

**Other Studies:**

**Section 12 - Ecological Information**

No information available.

**Section 13 - Disposal Considerations**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

**Section 14 - Transport Information**

	<b>US DOT</b>	<b>Canada TDG</b>
<b>Shipping Name:</b>	TOXIC LIQUIDS, CORROSIVE, ORGANIC, N.O.S.	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
<b>Hazard Class:</b>	6.1	6.1
<b>UN Number:</b>	UN2927	UN2927
<b>Packing Group:</b>	I	I

**Section 15 - Regulatory Information**

**US FEDERAL**

**TSCA**

CAS# 558-25-8 is listed on the TSCA inventory.

**Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**

CAS# 558-25-8: 1000 lb TPQ

**Section 313** No chemicals are reportable under Section 313.

**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 558-25-8 can be found on the following state right to know lists: California, (listed as Fluorides), New Jersey, Pennsylvania, Minnesota, (listed as Fluorides), Massachusetts.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:**

T+ C

**Risk Phrases:**

R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R 34 Causes burns.

**Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water

**WGK (Water Danger/Protection)**

CAS# 558-25-8: No information available.

**Canada - DSL/NDSL**

CAS# 558-25-8 is listed on Canada's NDSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D1A, E, F.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 558-25-8 is not listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 1/29/1998

**Revision #4 Date:** 3/16/2007

*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 Fisher 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 Fisher has been advised of the possibility of such damages.*