



Material Safety Data Sheet  
Diethylaminosulfur trifluoride

MSDS# 82178

Section 1 - Chemical Product and Company Identification

MSDS Name: Diethylaminosulfur trifluoride  
Catalog Numbers: AC216110000, AC216110050, AC216110250  
Synonyms: DAST.

Company Identification: Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

Company Identification: (USA) Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01  
For information in Europe, call: +32 14 57 52 11  
Emergency Number, Europe: +32 14 57 52 99  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300  
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

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CAS#: 38078-09-0  
Chemical Name: Diethylaminosulfur trifluoride  
%: 95  
EINECS#: 253-771-2  
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Hazard Symbols: C



Risk Phrases: 10 14 35 5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

**Danger!** Flammable liquid and vapor. Causes burns by all exposure routes. Reacts violently with water. Heating may cause an explosion. Target Organs: Respiratory system, gastrointestinal system, eyes, skin, mucous membranes.

Potential Health Effects

Eye: Causes severe eye burns.  
Skin: Causes skin burns. Substance is readily absorbed through the skin.  
Ingestion: Causes gastrointestinal tract burns. May cause burning sensations, coughing, wheezing, laryngitis, shortness of breath and headache.  
Inhalation: Causes chemical burns to the respiratory tract. May cause asthma and shortness of breath. May cause burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.  
Chronic: No information found.

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.

Ingestion: Do not induce vomiting. Get medical aid immediately. Call a poison control center.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

### 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. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor. Reacts violently with water.

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

Autoignition Temperature: Not available.

Flash Point: 23 deg C ( 73.40 deg F)

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: ; 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. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water. Do not get water inside containers. Do not let this chemical enter the environment.

### Section 7 - Handling and Storage

Handling: Do not allow water to get into the container because of violent reaction. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks and flame. Do not ingest or inhale. Do not allow contact with water. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a dry area. Flammables-area. Store in freezer.

### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Diethylaminosulfur trifluoride	none listed	none listed	2.5 mg/m3 TWA (as dust) (listed under Fluorides).

OSHA Vacated PELs: Diethylaminosulfur trifluoride: None listed

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

- Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- 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: Clear liquid  
Color: yellow to brown  
Odor: Not available  
pH: Not available  
Vapor Pressure: Not available  
Vapor Density: Not available  
Evaporation Rate: Not available  
Viscosity: Not available  
Boiling Point: 30 - 32 deg C @ 3 mmHg  
Freezing/Melting Point: Not available  
Decomposition Temperature: Not available  
Solubility in water: Reacts  
Specific Gravity/Density: 1.316  
Molecular Formula: C<sub>4</sub>H<sub>10</sub>F<sub>3</sub>NS  
Molecular Weight: 161.18

#### Section 10 - Stability and Reactivity

- Chemical Stability: May explode when heated. Reacts violently with water.
- Conditions to Avoid: Incompatible materials, ignition sources, excess heat, exposure to moist air or water.
- Incompatibilities with Other Materials: Water, strong oxidizing agents, acids, strong bases, alcohols.
- Hazardous Decomposition Products: Hydrogen cyanide, sulfur dioxide, carbon monoxide, oxides of nitrogen, carbon dioxide, hydrogen fluoride gas.
- Hazardous Polymerization: Has not been reported.

#### Section 11 - Toxicological Information

- RTECS#: CAS# 38078-09-0: None listed
- LD50/LC50: RTECS: Not available.
- Carcinogenicity: Diethylaminosulfur trifluoride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
- Other: The toxicological properties have not been fully investigated.

#### Section 12 - Ecological Information

- Other: Do not empty into drains.

#### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - Transport Information

US DOT

Shipping Name: Please contact Fisher Scientific for shipping information

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

## Section 15 - Regulatory Information

### European/International Regulations

#### European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 10 Flammable.

R 14 Reacts violently with water.

R 35 Causes severe burns.

R 5 Heating may cause an explosion.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

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.

#### WGK (Water Danger/Protection)

CAS# 38078-09-0: Not available

#### Canada

CAS# 38078-09-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: E, B6

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.

CAS# 38078-09-0 is not listed on Canada's Ingredient Disclosure List.

#### US Federal

##### TSCA

CAS# 38078-09-0 is not listed on the TSCA Inventory. It is for research and development use only.

## Section 16 - Other Information

MSDS Creation Date: 3/03/1998

Revision #6 Date 7/20/2009

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 the company 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 the company has been advised of the possibility of such damages.

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