

# Material Safety Data Sheet

## Xenon difluoride

ACC# 37261

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Xenon difluoride ,F2 Xe

**Catalog Numbers:** AC278550010

**Synonyms:** Xenon fluoride.

**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	EINECS/ELINCS
13709-36-9	Xenon difluoride	237-251-2

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white crystals.

**Danger!** Explosive when mixed with combustible material. Causes eye and skin burns. Causes digestive and respiratory tract burns. Air sensitive. Moisture sensitive.

**Target Organs:** Respiratory system, gastrointestinal system, eyes, skin.

#### Potential Health Effects

**Eye:** Causes eye burns.

**Skin:** Causes skin burns.

**Ingestion:** May cause severe and permanent damage to the digestive tract. May cause perforation of the digestive tract. Ingestion of large amounts of fluoride may cause salivation, nausea, vomiting, abdominal pain, fever, labored breathing.

**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. Causes corrosive action on the mucous membranes.

**Chronic:** Chronic effects include excessive calcification of the bones, ligaments, and tendons. Repeated inhalation may cause perforation of the nasal septum.

## 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. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

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

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

**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:** 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. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Do NOT get water inside containers. In case of fire, use carbon dioxide, dry chemical powder or appropriate foam.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 0; Instability: 2; Special Hazard: OX

## Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Wash area with soap and water. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation. Place under an inert atmosphere. Do not get water inside containers.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with

adequate ventilation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Handle under an inert atmosphere. Store protected from air. Do not allow contact with water. Do not store near combustible materials. Discard contaminated shoes. Keep from contact with moist air and steam. Inform laundry personnel of contaminant's hazards.

**Storage:** Do not store near combustible materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed. Do not expose to air. Store protected from moisture. Store under nitrogen.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Xenon difluoride	2.5 mg/m <sup>3</sup> TWA (as F) (listed under Fluorides).	none listed	2.5 mg/m <sup>3</sup> TWA (as F) (listed under Fluorides).2.5 mg/m <sup>3</sup> TWA (as F) (listed under Fluorides).

**OSHA Vacated PELs:** Xenon difluoride: 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:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystals

**Appearance:** white

**Odor:** None reported.

**pH:** Not available.

**Vapor Pressure:** sublimes w/o decomp

**Vapor Density:** Not available.

**Evaporation Rate:**Not available.

**Viscosity:** Not available.

**Boiling Point:** sublimes w/o decomp

**Freezing/Melting Point:**129 deg C

**Decomposition Temperature:**> 800 deg C

**Solubility:** 25 g/l @ 0 °C

**Specific Gravity/Density:**4.32

**Molecular Formula:**F2Xe

**Molecular Weight:**169.29

## Section 10 - Stability and Reactivity

**Chemical Stability:** Unstable. Air sensitive. Moisture sensitive. All xenon fluorides must be protected from moisture to avoid formation of xenon trioxide, a colorless, nonvolatile solid that's dangerously explosive when dry. Its solution, the so-called xenic acid, is a stable weak acid but a strong oxidizing agent.

**Conditions to Avoid:** Moisture, exposure to air.

**Incompatibilities with Other Materials:** Aluminum, carbonyl compounds, finely powdered metals, permanganates, iodates, acetone (explosive reaction), moisture, air, ethanol, organic materials, combustible materials.

**Hazardous Decomposition Products:** Hydrogen fluoride gas, fluorine.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 13709-36-9: ZE1294166

**LD50/LC50:**

CAS# 13709-36-9:

Inhalation, mouse: LC50 = 445 mg/m<sup>3</sup>/2H;

Oral, mouse: LD50 = 90 mg/kg;

**Carcinogenicity:**

CAS# 13709-36-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.

**Teratogenicity:** No information found

**Reproductive Effects:** No information found

**Mutagenicity:** No information found

**Neurotoxicity:** No information found

**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

	US DOT	Canada TDG
<b>Shipping Name:</b>	Oxidizing Solid, Corrosive, N.O.S.	Oxidizing Solid, Corrosive, N.O.S. (XENON DIFLUORIDE)
<b>Hazard Class:</b>	5.1	5.1
<b>UN Number:</b>	UN3085	UN3085
<b>Packing Group:</b>	II	II

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 13709-36-9 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

None of the chemicals in this product have a 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 depleters.

This material does not contain any Class 2 Ozone depleters.

#### 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# 13709-36-9 can be found on the following state right to know lists: California, (listed as Fluorides), Pennsylvania, (listed as Fluorides), Minnesota, (listed as Fluorides).

#### 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:

O C

#### Risk Phrases:

R 34 Causes burns.

R 9 Explosive when mixed with combustible material.

#### Safety Phrases:

S 17 Keep away from combustible material.

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).

#### WGK (Water Danger/Protection)

CAS# 13709-36-9: No information available.

#### Canada - DSL/NDSL

CAS# 13709-36-9 is listed on Canada's NDSL List.

#### Canada - WHMIS

This product has a WHMIS classification of C, E.

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# 13709-36-9 is not listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 6/09/1999

**Revision #7 Date:** 12/09/2005

*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.*