Xenon Difluoride	Pricing >

Linear Formula	XeF_2
Pubchem CID	83674
MDL Number	MFCD00040538
EC No.	237-251-2
IUPAC Name	difluoroxenon
Beilstein/Reaxys No.	N/A
SMILES	F[Xe]F
Inchl Identifier	InChI=1S/F2Xe/c1-3-2
Inchl Key	IGELFKKMDLGCJO-UHFFFAOYSA-N

Signal Word	Danger
Hazard Statements	H272-H301-H314-H330
Hazard Codes	T
Precautionary Statements	P210-P220-P280-P304 + P340 + P310-P305 + P351 + P338
Flash Point	Not applicable
Risk Codes	23-32-36/37/38-41
Safety Statements	26-36/37/39-45
RTECS Number	ZE1294166
Transport Information	UN 3087 6.1(5.1) / PGII
WGK Germany	3

GHS Pictograms	**GHS05 Corrosive**  **GHS03 Oxidizer**  **GHS06 Skull and Crossbones** 

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SAFETY DATA SHEET

Date Accessed: 03/28/2024
Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #13709-36-9

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS06 Skull and crossbones
Acute Tox. 2 H300 Fatal if swallowed.
Acute Tox. 2 H330 Fatal if inhaled.
GHS05 Corrosion
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).



Hazard pictograms
GHS05d GHS06
Signal word Danger
Hazard-determining components of labeling:
Hazard-determining components of labeling:
xenon difluoride
Hazard statements
H300+H330 Fatal if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage
Precautionary statements
P231 Handle under inert gas.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P221 Take any precaution to avoid mixing with combustibles.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present
and easy to do. Continue rinsing.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
4
3
0
OX
Health = 4
Fire = 3
Reactivity = 0
The substance possesses oxidizing properties.
HMIS-ratings (scale 0 - 4)
HEALTH
FIRE
REACTIVITY
3
3
0
Health = 3
Fire = 3
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS # / Substance Name
13709-36-9 xenon difluoride
Identification number(s)
EC number: 237-251-2

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
If inhaled:
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
In case of skin contact: Immediately wash with soap and water; rinse thoroughly.
In case of eye contact: Rinse opened eye for several minutes under running water. Consult a physician.
If swallowed:
Do not induce vomiting; immediately call for medical help.
Drink copious amounts of water and provide fresh air.
Immediately call a doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed:
No data available
Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents:
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced.
Advice for firefighters

Protective equipment: Mouth respiratory protective device.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Use personal protective equipment. Keep unprotected persons away.
Environmental precautions: No special measures required.
Methods and materials for containment and cleanup: Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling:
Precautions for safe handling
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Information about protection against explosions and fires: Keep respiratory protective device available.
Conditions for safe storage, including any incompatibilities: Keep cool.
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Recommended storage temperature: Store at temperatures not exceeding -18 °C.
Specific end use(s) No data available

SECTION 8. EXPOSURE

CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7.
Control parameters
Components with limit values that require monitoring at the workplace:
13709-36-9 xenon difluoride

PEL Long-term value: 2.5 mg/m^3
as F

REL Long-term value: 2.5 mg/m^3
as F

TLV Long-term value: 2.5 mg/m^3
as F, BEI
Ingredients with biological limit values:
13709-36-9 xenon difluoride
BEI 2 mg/L
Medium: urine
Time: prior to shift
Parameter: Fluoride (background, nonspecific)
3 mg/L
Medium: urine
Time: end of shift
Parameter: Fluoride (background, nonspecific)
Additional information: The lists that were valid during the creation were used as basis.
Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use
respiratory protective device that is independent of circulating air.
Protection of hands:
SProtective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the
chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and
varies from manufacturer to manufacturer.
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be
observed.
Eye protection:
RTightly sealed goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Appearance:
Form: Crystalline
Color: White
Odor: undistinguishable
Odor threshold: No data available.
pH: N/A
Melting point/Melting range: 128-130 °C (262-266 °F)
Boiling point/Boiling range: no data °C
Flash point: N/A
Flammability (solid, gas): Product is not flammable.
Ignition temperature:
Decomposition temperature: No data available.
Autoignition: No data available.
Danger of explosion: Product does not present an explosion hazard.
Explosion limits:
Lower: No data available.
Upper: No data available.
Vapor pressure: no data hPa

Density at 20 °C (68 °F): 4.32 g/cm^3 (36.05 lbs/gal)
Relative density No data available.
Vapor density N/A
Evaporation rate N/A
Solubility in / Miscibility with
Water at 0 °C (32 °F): 25 g/l
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Solvent content:
Organic solvents: 0.0 %
VOC content: 0.0 g/l / 0.00 lb/gl
Solids content: 100.0 %
Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No data available
Incompatible materials: No data available
Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin: Caustic effect on skin and mucous membranes.
on the eye:
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
Sensitization: No sensitizing effects known.
Additional toxicological information:
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus
and stomach.
Carcinogenic categories
IARC (International Agency for Research on Cancer)
13709-36-9 xenon difluoride 3
NTP (National Toxicology Program)
Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity: No data available
Persistence and degradability No data available
Behavior in environmental systems:
Bioaccumulative potential No data available
Mobility in soil No data available
Additional ecological information: Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation:
Must not be disposed of together with household garbage. Do not allow product to enter drains, sewage systems, or other water courses system.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA UN3085
UN proper shipping name
DOT, IATA Oxidizing solid, corrosive, n.o.s.
IMDG OXIDIZING SOLID, CORROSIVE, N.O.S.
Transport hazard class(es)
DOT
Class 5.1 Oxidizing substances
Label 5.1, 8
IMDG
Class 5.1 Oxidizing substances
Label 5.1/8
IATA
Class 5.1 Oxidizing substances
Label 5.1 (8)
Packing group
DOT, IMDG, IATA III
Environmental hazards:
Marine pollutant: No
Special precautions for user N/A
EMS Number: F-A,S-Q
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A
Transport/Additional information:
DOT
Quantity limitations On passenger aircraft/rail: 25 kg
On cargo aircraft only: 100 kg
IMDG
Limited quantities (LQ) 5 kg
Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g

UN "Model Regulation": UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S., 5.1 (8), III

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara
Section 355 (extremely hazardous substances):
Substance is not listed.
Section 313 (Specific toxic chemical listings):
Substance is not listed.
TSCA (Toxic Substances Control Act):
Substance is listed.
Proposition 65
Chemicals known to cause cancer:
Substance is not listed.
Chemicals known to cause reproductive toxicity for females:
Substance is not listed.
Chemicals known to cause reproductive toxicity for males:
Substance is not listed.
Chemicals known to cause developmental toxicity:
Substance is not listed.
Carcinogenic categories
EPA (Environmental Protection Agency)
Substance is not listed.
TLV (Threshold Limit Value established by ACGIH)
13709-36-9 xenon difluoride A4
NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.
GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms
GHS05 GHS06
Signal word Danger
Hazard-determining components of labeling:
xenon difluoride
Hazard statements
H300+H330 Fatal if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
Precautionary statements
P231 Handle under inert gas.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P221 Take any precaution to avoid mixing with combustibles.
P301+P310 IF SWALLOWED: Immediately call a

POISON CENTER/ doctor.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present
and easy to do. Continue rinsing.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.