


Molybdenum(VI) Fluoride		Pricing >
Linear Formula	MoF ₆	
Pubchem CID	82219	
MDL Number	N/A	
EC No.	232-026-5	
IUPAC Name	hexafluoromolybdenum	
Beilstein/Reaxys No.	N/A	
SMILES	F[Mo](F)(F)(F)(F)F	
Inchl Identifier	InChI=1S/6FH.Mo/h6*1H;/q;+++++6/p-6	
Inchl Key	RLCOZMCCEKDUPLY-UHFFFAOYSA-H	
Signal Word	Danger	
Hazard Statements	H314	
Hazard Codes	N/A	
Precautionary Statements	P260-P280-P303 + P361 + P353-P304 + P340 + P310-P305 + P351 + P338	
Flash Point	Not applicable	
Risk Codes	N/A	
Safety Statements	N/A	
RTECS Number	QA4681450	
Transport Information	UN 3264 8 / PGII	
WGK Germany	3	
GHS Pictograms	<u>GHS05</u> <u>Corrosive</u> 	

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SAFETY DATA SHEET

Date Accessed: 04/19/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #7783-77-9

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
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin corrosion(Category 1B), H314
Serious eye damage(Category 1), H318

GHS Label elements, including precautionary statements
Pictogram



Signal word
Danger
Hazard statement(s)
H314
Causes severe skin burns and eye damage.
Precautionary statement(s)
P264
Wash skin thoroughly after handling.
P280
Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/

shower.

P304 + P340

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER or doctor/physician.

P321

Specific treatment (see supplemental first aid instructions on this label).

P363

Wash contaminated clothing before reuse.

P405

Store locked up.

P501

Dispose of contents/ container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Synonyms: Molybdenum hexafluoride

Formula: F6Mo

Molecular weight: 209.93 g/mol

CAS-No.: 7783-77-9

EC-No.: 232-026-5

Component

Molybdenum hexafluoride

Classification

Skin Corr.1B; Eye Dam.1; H314

Concentration

<=100%

SECTION 4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Continue rinsing eyes during transport to hospital.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
Hydrogen fluoride, Molybdenum oxides

Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing Vapors, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas.
For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling
Avoid inhalation of Vapor or mist.
Normal measures for preventive fire protection.
For precautions see section 2.
Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Hydrolyses readily.
Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Components with workplace control parameters
Component
CAS-No.
Value
Control parameters
Basis
Molybdenum hexafluoride
7783-77-9
TWA
2.5 mg/m³
USA. Occupational Exposure Limits(OSHA)-Table Z-1
Limits for Air Contaminants
Remarks
CAS number varies with compound
TWA
2.5 mg/m³
USA. Occupational Exposure Limits(OSHA)-Table
Z2Z37.28-1969 TWA
2.5 mg/m³
USA. ACGIH Threshold Limit Values(TLV)
Bone damage
Fluorosis
Substances for which there is a Biological Exposure Index or Indices(see BEI® section) Not classifiable as a human carcinogen varies
TWA
2.5 mg/m³
USA. OSHA-TABLE Z-1 Limits for Air

Contaminants-1910.1000

Biological occupational exposure limits

Component

CAS-No.

Parameters

Value

Biological specimen

Basis

Molybdenum hexafluoride

7783-77-9

Fluorides

3 mg/g

In urine

ACGIH-Biological Exposure Indices(BEI)

Remarks

Prior to shift (16 hours after exposure ceases)

Fluorides

10 mg/g

In urine

ACGIH-Biological Exposure Indices(BEI)

End of shift (As soon as possible after exposure ceases)

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full

-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or

CEN(EU).
Control of environmental exposure
Do not let product enter drains

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Form:

liquid

Odor

no data available

Odor Threshold

no data available

pH

no data available

Melting point/freezing point

Melting point/range:

17.5 °C (63.5 °F)-lit.

Initial boiling point and boiling range

37 °C (99 °F)-lit.

Flash point

not applicable

Evaporation rate

no data available

Flammability (solid, gas)

no data available

Upper/lower flammability or explosive limits

no data available

Vapor pressure

no data available

Vapor density

no data available

Relative density

2.3 g/cm³ at 25 °C (77 °F)

Water solubility

no data available

Partition coefficient: n-octanol/water

no data available

Auto-ignition temperature

no data available

Decomposition temperature

no data available

Viscosity

no data available

Explosive properties

no data available

Oxidizing properties

no data available

Other safety information

no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Incompatible materials

acids, Strong bases

Hazardous decomposition products

Other decomposition products

-no data available

In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LC50 Inhalation-rat-333 mg/m³

Remarks:

Lungs, Thorax, or Respiration:Structural or functional change in trachea or bronchi. Lungs, Thorax, or Respiration:Respiratory obstruction. Blood: Hemorrhage.

LC50 Inhalation-mouse-339 mg/m³

Remarks:

Lungs, Thorax, or Respiration:Structural or functional change in trachea or bronchi. Lungs, Thorax, or Respiration:Respiratory obstruction. Blood: Hemorrhage.

Dermal:

no data available

no data available

Skin corrosion/irritation

Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC:

3-Group 3: Not classifiable as to its carcinogenicity to humans (Molybdenum hexafluoride)

NTP:

No component of this product present at levels

greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

no data available

Specific target organ toxicity-single exposure

no data available

Specific target organ toxicity-repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: QA4681450

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.,

Cough, Shortness of breath, Headache, Nausea

Stomach-Irregularities-Based on Human Evidence

Stomach-Irregularities-Based on Human Evidence

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical

safety assessment not required/not conducted

Other adverse effects

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contact a licensed professional waste disposal service to dispose of this material.

Dissolve or mix the material with a combustible solvent and burn in a

chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US)
UN number:
3264
Class:
8
Packing group:
II
Proper shipping name:
Corrosive liquid, acidic, inorganic, n.o.s.(Molybdenum hexafluoride)
Marine pollutant:
No
Poison Inhalation Hazard:
No
IMDG
UN number:
3264
Class:
8
Packing group:
II
EMS-No:
F-A,S-B
Proper shipping name:
CORROSIVE LIQUID, ACIDIC, INORGANIC,
N.O.S.(Molybdenum hexafluoride)
Marine pollutant:
No
IATA
UN number:
3264
Class:
8
Packing group:
II
Proper shipping name:
Corrosive liquid, acidic, inorganic, n.o.s.(Molybdenum hexafluoride)

SECTION 15. REGULATORY INFORMATION

SARA 302 Components
SARA 302: No chemicals in this material are subject

to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Molybdenum hexafluoride

CAS-No. 7783-77-9

Revision Date

2008-06-01

New Jersey Right To Know Components

Molybdenum hexafluoride

CAS-No. 7783-77-9

Revision Date

2008-06-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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.