

Revision Date 03-May-2012

Revision Number 2

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description:
Cat No.

Hafnium(IV) fluoride
383160000; 383160050; 383160250

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Laboratory chemicals
Uses advised against	No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

E-mail address

begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01
For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300
CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture REGULATION (EC) No 1272/2008

Skin Corrosion/irritation	Category 1 B
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Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s)

C - Corrosive

R-phrases(s)

R32 - Contact with acids liberates very toxic gas
R34 - Causes burns

Label Elements

Hafnium(IV) fluoride

Revision Date 03-May-2012

SECTION 2. HAZARDS IDENTIFICATION



Signal Word

Danger

Hazard Statements

H314 - Causes severe skin burns and eye damage

EUH032 - Contact with acids liberates very toxic gas

Precautionary Statements - EU (§28, 1272/2008)

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P280 - Wear eye protection/ face protection

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

P233 - Keep container tightly closed

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Hafnium tetrafluoride 13709-52-9	EEC No. 237-258-0	98	13709-52-9	R32 C; R34	Skin Corr. 1B (H314) (EUH032)	-

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Hafnium(IV) fluoride

Revision Date 03-May-2012

Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician immediately.
Inhalation	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.
Notes to Physician	Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

Carbon dioxide (CO₂). Dry chemical. chemical foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not let this chemical enter the environment.

SECTION 7. HANDLING AND STORAGE**Precautions for Safe Handling**

Do not breathe dust. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Do not ingest. Use only in area provided with appropriate exhaust ventilation.

Hafnium(IV) fluoride

Revision Date 03-May-2012

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Corrosives area.

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Component

Hafnium tetrafluoride

European Union	The United Kingdom	France	Belgium	Spain
				VLA-ED: 0.5 mg/m ³ 8 horas

Component

Hafnium tetrafluoride

Italy	Germany	Portugal	The Netherlands	Finland
	TWA: 1 mg/m ³ 8 Stunden. F inhalable fraction exposure factor 4	TWA: 0.5 mg/m ³ 8 horas TWA: 2.5 mg/m ³ 8 horas		

Component

Hafnium tetrafluoride

Austria	Denmark	Switzerland	Poland	Norway
TWA: 0.5 mg/m ³ 8 Stunden				TWA: 0.6 mg/m ³ 8 timer

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas Ensure that eyewash stations and safety showers are close to the workstation location

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

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

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Hafnium(IV) fluoride

Revision Date 03-May-2012

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Powder, Solid
Appearance	White
pH	No information available.
Vapor Pressure	No information available.
Vapor Density	No information available.
Boiling Point/Range	No information available.
Melting Point/Range	No information available.
Flash Point	No information available.
Autoignition Temperature	No information available.
Molecular Formula	F ₄ Hf
Molecular Weight	254.48

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Stable.

Possibility of Hazardous Reactions

Hazardous Polymerization	No information available.
Hazardous Reactions .	No information available.

Conditions to Avoid

Avoid dust formation, Incompatible products.

Incompatible Materials

Acids, Strong oxidizing agents.

Hazardous Decomposition Products

Gaseous hydrogen fluoride (HF).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Hafnium(IV) fluoride

Revision Date 03-May-2012

SECTION 11. TOXICOLOGICAL INFORMATION**Chronic Toxicity****Carcinogenicity**

There are no known carcinogenic chemicals in this product

Sensitization

No information available.

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Target Organs

No information available.

Other Adverse Effects

The toxicological properties have not been fully investigated.

Endocrine Disruptor Information

None known

SECTION 12. ECOLOGICAL INFORMATION**Toxicity****Ecotoxicity effects**

Do not empty into drains

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment**Other adverse effects**

No information available

SECTION 13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Waste from Residues / Unused Products**

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken to local recyclers for disposal

Hafnium(IV) fluoride

Revision Date 03-May-2012

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO

UN-No 3260
Hazard Class 8
Packing Group III
Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

ADR

UN-No 3260
Hazard Class 8
Packing Group III
Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

IATA

UN-No 3260
Hazard Class 8
Packing Group III
Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.*

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Hafnium tetrafluoride	237-258-0	-		-	-	-	-	-	-	-	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

CHINA - China Inventory of Existing Chemical Substances

AICS - Inventory of Chemical Substances

KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

Hafnium(IV) fluoride

Revision Date 03-May-2012

SECTION 16. OTHER INFORMATION**Full text of R-phrases referred to under sections 2 and 3**

R32 - Contact with acids liberates very toxic gas

R34 - Causes burns

Revision Date 03-May-2012

Revision Summary

Reason for revision Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet