



SAFETY DATA SHEET

ProChemOnline.com



SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Hafnium (IV) oxide**

PRODUCT NO: 1960

CAS NO: 12055-23-1

SYNONYMS: Hafnium dioxide, Hafnia

MANUFACTURER:

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IN CASE OF TRANSPORTATION EMERGENCY CONTACT CHEM-TREC: 1-800-424-9300

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Not a dangerous substance according to the GHS

HMIS CLASSIFICATION:

Health: 0 Flammability: 0 Reactivity: 0

NFPA RATING:

Health: 0 Fire: 0 Reactivity Hazard: 0

EYE CONTACT: May cause slight to mild irritation of the eyes.

SKIN CONTACT: May cause slight to mild irritation of the skin.

INHALATION: Do not breathe dust. May be irritating to the nose, mucous membranes and respiratory tract.

INGESTION: May be harmful if swallowed.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: HfO_2

Molecular Weight: 210.49

CHEMICAL NAME	CAS#	%	ACGIH (TWA)	OSHA (PEL)
Hafnium (IV) oxide	12055-23-1	100	0.5 mg/m3 (as Hf)	0.5 mg/m3 (as Hf)

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SECTION 4 FIRST AID MEASURES (Cont.)

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Product is not flammable.

AUTO IGNITION TEMPERATURE: Not applicable

EXPLOSION LIMITS: Not applicable

EXTINGUISHING MEDIUM: Use fire fighting measures that suit the surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: If involved in a fire the material may emit irritating fumes of hafnium oxide.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Avoid dust formation. Avoid breathing dust, vapors, mist, or gas.

ENVIRONMENTAL PRECAUTIONS: Do not let product enter drains or allow to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Small spills can be mixed with vermiculite or sodium carbonate and swept up.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear approved personal protective equipment. Ensure adequate ventilation.

CONDITIONS FOR SAFE STORAGE: Store material in a tightly sealed container.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EYE PROTECTION: Always wear approved safety glasses with side shields, safety goggles, or face shield when handling a chemicals substance in the laboratory.

SKIN PROTECTION: Chemical resistant gloves.

VENTILATION: If possible, handle the material in an efficient fume hood.

RESPIRATOR: If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Off white powder

MELTING POINT: 2774° C

BOILING POINT: 5400° C

MOLECULAR WEIGHT: 210.49

ODOR: None

SPECIFIC GRAVITY: 9.68 gm/ml

VAPOR PRESSURE: Not applicable

SOLUBILITY IN WATER: Insoluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: None

SECTION 10 STABILITY AND REACTIVITY (Cont.)

CONDITIONS TO AVOID: None

INCOMPATIBILITY: Strong oxidizing agents

DECOMPOSITION PRODUCTS: Hafnium oxide

SECTION 11 TOXICOLOGICAL DATA

RTECS DATA: No information available in the RTECS files.

CARCINOGENIC EFFECTS: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.

MUTAGENIC EFFECTS: No data

TETRATOGENIC EFFECTS: No data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

No information available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

Non-hazardous material

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA Inventory

SARA 302 COMPONENTS: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA (TITLE 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: No SARA Hazards

MASSACHUSETTS RIGHT TO KNOW COMPONENTS: No components are subject to the Massachusetts Right to Know Act.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS: Hafnium dioxide

NEW JERSEY RIGHT TO KNOW COMPONENTS: Hafnium dioxide

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.

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

DATE PREPARED: 04/14

SDS DEPT.