

SDS

SAFETY DATA SHEET

Oakwood Products, Inc
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Phone Numbers:

Product Information	803-739-8800
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MATERIAL IDENTIFICATION

NAME: **Tetrakis(dimethylamido)hafnium(IV)**
 CAS#: [19782-68-4]
 CAT#: 098981
 For R&D use only.

HAZARDS IDENTIFICATION**GHS Classification**

Flammable solids (Category 1)
 Substances And Mixtures Which, In Contact With Water, Emit Flammable Gases (Category 2)
 Skin corrosion/irritation (Category 1B)
 Serious eye damage/eye irritation (Category 1)

GHS Label elements, including precautionary statements**Pictograms****Signal Word**

Danger

Hazard Statement(s)

H228	Flammable solid
H261	In contact with water releases flammable gas
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Precautionary Statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire.
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.
P402 + P404	Store in a dry place. Store in a closed container.

COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms	: Tetrakis(dimethylamino)hafnium(IV), TDMAH
Formula	: C ₈ H ₂₄ HfN ₄
Molecular Weight	: 354.80 g/mol

CAS	Description	Concentration
19782-68-4	Tetrakis(dimethylamido)hafnium(IV)	

FIRST AID MEASURES

In case of eye contact

Immediately flush eyes with running water for at least 15 minutes while keeping eyes open. Seek medical attention.

In case of skin contact

Wash thoroughly with soap and plenty of water. Seek medical attention.

If inhaled

Remove victim from source of exposure to fresh air. If breathing is difficult, administer oxygen. Seek medical attention.

If swallowed

Do not induce vomiting. Give water to victim to drink. Seek medical attention.

FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use carbon dioxide, dry chemical powder, alcohol-resistant or polymer foam.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire and explosion hazards/decomposition of product

emits toxic fumes under fire conditions.

ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing fumes, vapors, mists or gas. Ventilate area. Remove all sources of ignition. Evacuate personnel.

Environmental precautions

Prevent further leakage if safe to do so.

Methods and materials for containment and clean up

Absorb spills on sand or vermiculite and place in closed container for disposal.

HANDLING AND STORAGE

Precautions for safe handling

Avoid prolonged use. Avoid all direct contact with material. Do not breathe dust or vapor. Wash thoroughly after handling.

Reacts violently with water.

Precautions for safe storage

Keep container tightly closed. Store in a cool, dry, well-ventilated area.

EXPOSURE CONTROL/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Eye/face protection

Wear protective safety goggles or face shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Hand/skin protection

Avoid all direct contact with product.

Wear chemical-resistant gloves.

Wear protective clothing and boots.

After contact with skin, wash immediately.

Respiratory protection

Ensure adequate ventilation during use. Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the exposure limits.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	solid
Odour	no data available
Odour Threshold	no data available
Melting point/Freezing Point	26-29°C
Boiling Point	no data available
Flash Point	no data available
Evaporation Rate	no data available
Flammability (solid, gas)	no data available
Upper/Lower Flammability or Explosive limits	no data available
Vapour pressure	no data available
Relative Density	1.098
Solubility(ies)	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
Refractive Index	no data available

STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

May evolve carbon monoxide, carbon dioxide, and nitrogen oxides.

TOXICOLOGICAL INFORMATION

Acute toxicity

Skin corrosion/irritation

Causes severe skin burns and eye damage

Serious eye damage/eye irritation

Causes serious eye damage

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

Exposure Routes

Irritating to skin, eyes, and respiratory system.

May have harmful effects if inhaled or swallowed.

Signs and Symptoms of Exposure

Cough, Shortness of breath, Headache, Nausea, Vomiting

To the best of our knowledge, the health hazards of this material have not been fully investigated.

ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

DISPOSAL CONSIDERATIONS

Dissolve in or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all Federal, State and local laws.

TRANSPORT INFORMATION

DOT

Organometallic substance, solid, water-reactive, flammable

4.3, 4.1

UN3396 II

IMDG

Organometallic substance, solid, water-reactive, flammable

4.3, 4.1

UN3396 II

EMS-No: F-G, S-N

Marine Pollutant: No

IATA

Organometallic substance, solid, water-reactive, flammable

4.3, 4.1

UN3396 II

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: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

New Jersey Right to Know Components

This product may contain a chemical on the New Jersey Right to Know Components List.

	CAS
Tetrakis(dimethylamido)hafnium(IV)	19782-68-4

California Prop. 65 Components

This product may contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

OTHER INFORMATION

Version : 1.0

Revision Date : 2/5/2016

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Oakwood shall not be held liable for any damage resulting from handling or from contact with the above product.