



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

**Product identifier** Hafnium Oxide-Calcia Stabilized

### Other means of identification

**SDS number** 1KJ  
**Materion Code** 1KJ  
**CAS number** 12055-23-1

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** Materion Advanced Chemicals Inc.  
**Address** 407 N 13th Street  
1316 W. St. Paul Avenue  
Milwaukee, WI 53233  
United States  
**Telephone** 414.212.0257  
**E-mail** advancedmaterials@materion.com  
**Contact person** Noreen Atkinson  
**Emergency phone number** Chemtrec 800.424.9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** Not available.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Substances

| Chemical name                   | Common name and synonyms | CAS number | %   |
|---------------------------------|--------------------------|------------|-----|
| Hafnium Oxide-Calcia Stabilized |                          | 12055-23-1 | 100 |

## 4. First-aid measures

**Inhalation** Not available.  
**Skin contact** Not available.  
**Eye contact** Not available.

Ingestion Not available.

Most important symptoms/effects, acute and delayed Not available.

## 5. Fire-fighting measures

Suitable extinguishing media Not available.

Unsuitable extinguishing media Not available.

Specific hazards arising from the chemical Not applicable.

Special protective equipment and precautions for firefighters Not available.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Not available.

Methods and materials for containment and cleaning up Not available.

Environmental precautions Not available.

## 7. Handling and storage

Precautions for safe handling Not available.

Conditions for safe storage, including any incompatibilities Not available.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

| Material   | Type | Value     |
|--|------|-----------|
| Hafnium Oxide-Calcia Stabilized (CAS 12055-23-1) | TWA  | 0.5 mg/m3 |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Material   | Type | Value     |
|--|------|-----------|
| Hafnium Oxide-Calcia Stabilized (CAS 12055-23-1) | TWA  | 0.5 mg/m3 |

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Not available.

### Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

#### Skin protection

Hand protection Not available.

Other Not available.

Respiratory protection Not available.

Thermal hazards Not available.

## 9. Physical and chemical properties

### Appearance

Physical state Solid.

Form Not available.

|   |                     |
|---|---------------------|
| Color   | Not available.      |
| Odor  | Not available.      |
| Odor threshold                                      | Not available.      |
| pH  | Not available.      |
| Melting point/freezing point                        | Not available.      |
| Initial boiling point and boiling range             | Not available.      |
| Flash point   | Not available.      |
| Evaporation rate                                    | Not available.      |
| Flammability (solid, gas)                           | Not available.      |
| <b>Upper/lower flammability or explosive limits</b> |                     |
| Flammability limit - lower (%)                      | Not available.      |
| Flammability limit - upper (%)                      | Not available.      |
| Explosive limit - lower (%)                         | Not available.      |
| Explosive limit - upper (%)                         | Not available.      |
| Vapor pressure                                      | 399.97 kPa at 25 °C |
| Vapor density                                       | Not available.      |
| Relative density                                    | Not available.      |
| <b>Solubility(ies)</b>                              |                     |
| Solubility (water)                                  | Not available.      |
| Partition coefficient (n-octanol/water)             | Not available.      |
| Auto-ignition temperature                           | Not available.      |
| Decomposition temperature                           | Not available.      |
| Viscosity   | Not available.      |
| <b>Other information</b>                            |                     |
| Molecular formula                                   | HfO2                |

## 10. Stability and reactivity

|                                    |                |
|------------------------------------|----------------|
| Reactivity                         | Not available. |
| Chemical stability                 | Not available. |
| Possibility of hazardous reactions | Not available. |
| Conditions to avoid                | Not available. |
| Incompatible materials             | Not available. |
| Hazardous decomposition products   | Not available. |

## 11. Toxicological information

|  |                |
|--|----------------|
| <b>Information on likely routes of exposure</b>                              |                |
| Inhalation   | Not available. |
| Skin contact   | Not available. |
| Eye contact  | Not available. |
| Ingestion  | Not available. |
| Symptoms related to the physical, chemical and toxicological characteristics | Not available. |

## Information on toxicological effects

**Acute toxicity** Not available.

**Skin corrosion/irritation** Not available.

**Serious eye damage/eye irritation** Not available.

## Respiratory or skin sensitization

**Respiratory sensitization** Not available.

**Skin sensitization** Not available.

**Germ cell mutagenicity** Not available.

## Carcinogenicity

### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

**Reproductive toxicity** Not available.

**Specific target organ toxicity - single exposure** Not available.

**Specific target organ toxicity - repeated exposure** Not available.

**Aspiration hazard** Not available.

## 12. Ecological information

**Ecotoxicity** No ecotoxicity data noted for the ingredient(s).

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Mobility in soil** Not available.

**Other adverse effects** Not available.

## 13. Disposal considerations

**Disposal instructions** Not available.

**Waste from residues / unused products** Not available.

**Contaminated packaging** Not available.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

## 15. Regulatory information

### US federal regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

|                          |                        |
|--------------------------|------------------------|
| <b>Hazard categories</b> | Immediate Hazard - No  |
|                          | Delayed Hazard - No    |
|                          | Fire Hazard - No       |
|                          | Pressure Hazard - No   |
|                          | Reactivity Hazard - No |

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**      Yes

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**      Not regulated.

**16. Other information, including date of preparation or last revision**

|                   |                |
|-------------------|----------------|
| <b>Issue date</b> | 01-11-2018     |
| <b>Version #</b>  | 01             |
| <b>Disclaimer</b> | Not available. |