



# SAFETY DATA SHEET

**MATERION**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

|                              |                                       |
|------------------------------|---------------------------------------|
| <b>Name of the substance</b> | Cerium Nitride                        |
| <b>Identification number</b> | 247-243-0 (EC number)                 |
| <b>Registration number</b>   | -                                     |
| <b>Document number</b>       | 1VE                                   |
| <b>Synonyms</b>              | Cerium nitride * Cerium nitride (CeN) |
| <b>Materion Code</b>         | 1VE                                   |
| <b>Issue date</b>            | 31-January-2017                       |
| <b>Revision date</b>         | 30-July-2019                          |

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

|                       |   |
|-----------------------|---|
| <b>Company name</b>   | Materion Advanced Chemicals Inc.  |
| <b>Address</b>        | 407 N. 13th Street<br>1316 W. St. Paul Avenue<br>Milwaukee, WI 53233<br>United States |
| <b>Division</b>       | Milwaukee   |
| <b>Telephone</b>      | 414.212.0257  |
| <b>e-mail</b>         | advancedmaterials@materion.com  |
| <b>Contact person</b> | Laura Hamilton  |

### 1.4. Emergency telephone number

|                        |                 |
|------------------------|-----------------|
| <b>Supersedes date</b> | 12-January-2018 |
| <b>Version number</b>  | 05              |

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

|                             |                |
|-----------------------------|----------------|
| <b>Identified uses</b>      | Not available. |
| <b>Uses advised against</b> | None known.    |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

|                       |   |
|-----------------------|---|
| <b>Hazard summary</b> | The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated. |
|-----------------------|---|

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** Cerium Nitride

#### Hazard pictograms



**Signal word** Danger

#### Hazard statements

H261 In contact with water releases flammable gases.

#### Precautionary statements

##### Prevention

P223 Observe good industrial hygiene practices.  
Do not allow contact with water.

|                                       |  |
|---------------------------------------|--|
| <b>Response</b>                       | Wash hands after handling.   |
| <b>Storage</b>                        | Store away from incompatible materials.  |
| <b>Disposal</b>                       | Dispose of waste and residues in accordance with local authority requirements.   |
| <b>Supplemental label information</b> | 99,9% of the substance consists of component(s) of unknown acute oral toxicity. 99,9% of the substance consists of component(s) of unknown acute dermal toxicity. 99,9% of the substance consists of component(s) of unknown acute hazards to the aquatic environment. 99,9% of the substance consists of component(s) of unknown long-term hazards to the aquatic environment. For further information, please contact the Product Stewardship Department at +1.800.862.4118. |
| <b>2.3. Other hazards</b>             | Not a PBT or vPvB substance or mixture.  |

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### General information

| Chemical name          | %    | CAS-No. / EC No.        | REACH Registration No. | Index No. | Notes |
|------------------------|------|-------------------------|------------------------|-----------|-------|
| Cerium Nitride         | 99,9 | 25764-08-3<br>247-243-0 | -                      | -         |       |
| <b>Classification:</b> | -    |                         |                        |           |       |

#### List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

#: This substance has been assigned Union workplace exposure limit(s).

#: This substance has been assigned Community workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4: First aid measures

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Get medical attention if irritation develops and persists.

**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion** Get medical advice/attention if you feel unwell.

**4.2. Most important symptoms and effects, both acute and delayed** Direct contact with eyes may cause temporary irritation.

**4.3. Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

## SECTION 5: Firefighting measures

**General fire hazards** No unusual fire or explosion hazards noted.

### 5.1. Extinguishing media

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** None known.

**5.2. Special hazards arising from the substance or mixture** During fire, gases hazardous to health may be formed.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Wear suitable protective equipment.

**Special firefighting procedures** Use water spray to cool unopened containers.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

|                                    |   |
|------------------------------------|---|
| <b>For non-emergency personnel</b> | Keep unnecessary personnel away. For personal protection, see section 8 of the SDS. |
| <b>For emergency responders</b>    | Keep unnecessary personnel away.  |

**6.2. Environmental precautions** No special environmental precautions required.

**6.3. Methods and material for containment and cleaning up** Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

**6.4. Reference to other sections** For personal protection, see section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Use care in handling/storage.

**7.2. Conditions for safe storage, including any incompatibilities** Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**7.3. Specific end use(s)** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Occupational exposure limits** No exposure limits noted for ingredient(s).

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

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

### 8.2. Exposure controls

**Appropriate engineering controls** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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

**General information** Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

#### Skin protection

- **Hand protection** Wear appropriate chemical resistant gloves.

- **Other** Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

### Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

### Environmental exposure controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

|                       |        |
|-----------------------|--------|
| <b>Physical state</b> | Solid. |
| <b>Form</b>           | Solid. |

|   |                                 |
|---|---------------------------------|
| <b>Colour</b>                                       | Not available.                  |
| <b>Odour</b>  | Not available.                  |
| <b>Odour threshold</b>                              | Not available.                  |
| <b>pH</b>   | Not available.                  |
| <b>Melting point/freezing point</b>                 | Not available.                  |
| <b>Initial boiling point and boiling range</b>      | Not available.                  |
| <b>Flash point</b>                                  | Not available.                  |
| <b>Evaporation rate</b>                             | Not available.                  |
| <b>Flammability (solid, gas)</b>                    | Not available.                  |
| <b>Upper/lower flammability or explosive limits</b> |                                 |
| <b>Flammability limit - lower (%)</b>               | Not available.                  |
| <b>Flammability limit - upper (%)</b>               | Not available.                  |
| <b>Vapour pressure</b>                              | < 0,0000001 kPa (25 °C (77 °F)) |
| <b>Vapour density</b>                               | Not available.                  |
| <b>Relative density</b>                             | Not available.                  |
| <b>Solubility(ies)</b>                              |                                 |
| <b>Solubility (water)</b>                           | Not available.                  |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.                  |
| <b>Auto-ignition temperature</b>                    | Not available.                  |
| <b>Decomposition temperature</b>                    | Not available.                  |
| <b>Viscosity</b>                                    | Not available.                  |
| <b>Explosive properties</b>                         | Not explosive.                  |
| <b>Oxidising properties</b>                         | Not oxidising.                  |
| <b>9.2. Other information</b>                       |                                 |
| <b>Molecular formula</b>                            | CeN                             |
| <b>Molecular weight</b>                             | 154,12 g/mol                    |

## SECTION 10: Stability and reactivity

|   |   |
|---|---|
| <b>10.1. Reactivity</b>                         | Not available.  |
| <b>10.2. Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>10.3. Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.   |
| <b>10.4. Conditions to avoid</b>                | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. |
| <b>10.5. Incompatible materials</b>             | None known.   |
| <b>10.6. Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## SECTION 11: Toxicological information

|   |  |
|---|--|
| <b>General information</b>                        | Occupational exposure to the substance or mixture may cause adverse effects. |
| <b>Information on likely routes of exposure</b>   |  |
| <b>Inhalation</b>                                 | Due to lack of data the classification is not possible.                      |
| <b>Skin contact</b>                               | Due to lack of data the classification is not possible.                      |
| <b>Eye contact</b>                                | Due to lack of data the classification is not possible.                      |
| <b>Ingestion</b>                                  | Due to lack of data the classification is not possible.                      |
| <b>Symptoms</b>                                   | Exposure may cause temporary irritation, redness, or discomfort.             |
| <b>11.1. Information on toxicological effects</b> |  |
| <b>Acute toxicity</b>                             | Not known.   |
| <b>Skin corrosion/irritation</b>                  | Due to partial or complete lack of data the classification is not possible.  |
| <b>Serious eye damage/eye irritation</b>          | Due to partial or complete lack of data the classification is not possible.  |
| <b>Respiratory sensitisation</b>                  | Due to partial or complete lack of data the classification is not possible.  |

|                               |   |
|-------------------------------|---|
| <b>Skin sensitisation</b>     | Due to partial or complete lack of data the classification is not possible. |
| <b>Germ cell mutagenicity</b> | Due to partial or complete lack of data the classification is not possible. |
| <b>Carcinogenicity</b>        | Due to partial or complete lack of data the classification is not possible. |

**Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)**

Not listed.

|   |   |
|---|---|
| <b>Reproductive toxicity</b>                              | Due to partial or complete lack of data the classification is not possible. |
| <b>Specific target organ toxicity - single exposure</b>   | Due to partial or complete lack of data the classification is not possible. |
| <b>Specific target organ toxicity - repeated exposure</b> | Due to partial or complete lack of data the classification is not possible. |
| <b>Aspiration hazard</b>                                  | Due to partial or complete lack of data the classification is not possible. |
| <b>Mixture versus substance information</b>               | No information available.   |
| <b>Other information</b>                                  | Not available.  |

## SECTION 12: Ecological information

|  |   |
|--|---|
| <b>12.1. Toxicity</b>                                  | Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.   |
| <b>12.2. Persistence and degradability</b>             | No data is available on the degradability of this product.  |
| <b>12.3. Bioaccumulative potential</b>                 | No data available.  |
| <b>Partition coefficient n-octanol/water (log Kow)</b> | Not available.  |
| <b>Bioconcentration factor (BCF)</b>                   | Not available.  |
| <b>12.4. Mobility in soil</b>                          | No data available.  |
| <b>12.5. Results of PBT and vPvB assessment</b>        | Not a PBT or vPvB substance or mixture.   |
| <b>12.6. Other adverse effects</b>                     | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                     |  |
|-------------------------------------|--|
| <b>Residual waste</b>               | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| <b>Contaminated packaging</b>       | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.       |
| <b>EU waste code</b>                | The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.   |
| <b>Disposal methods/information</b> | Collect and reclaim or dispose in sealed containers at licensed waste disposal site.   |
| <b>Special precautions</b>          | Dispose in accordance with all applicable regulations.   |

## SECTION 14: Transport information

### ADR

14.1. - 14.6.: Not regulated as dangerous goods.

### RID

14.1. - 14.6.: Not regulated as dangerous goods.

### ADN

14.1. - 14.6.: Not regulated as dangerous goods.

### IATA

14.1. - 14.6.: Not regulated as dangerous goods.

### IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

## SECTION 15: Regulatory information

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

Material name: Cerium Nitride

1VE Version #: 05 Revision date: 30-July-2019 Issue date: 31-January-2017

## EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

## Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

## Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

## Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

## Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

## National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

### List of abbreviations

Not available.

### References

Not available.

### Training information

Follow training instructions when handling this material.

### Disclaimer

Materion Advanced Chemicals Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.