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|--|------------------------------|
| <a href="#">Zirconium Nitride</a>                            | <a href="#">Pricing &gt;</a> |
| <a href="#">Zirconium Nitride Nanoparticles / Nanopowder</a> | <a href="#">Pricing &gt;</a> |
| <a href="#">Zirconium Nitride Sputtering Target</a>          | <a href="#">Pricing &gt;</a> |
| <b>Linear Formula</b>  | ZrN                          |
| <b>Pubchem CID</b>   | 94359                        |
| <b>MDL Number</b>  | MFCD00049642                 |
| <b>EC No.</b>  | 247-166-2                    |
| <b>IUPAC Name</b>  | azanylidynезirconium         |
| <b>Beilstein/Reaxys No.</b>                                  | N/A                          |
| <b>SMILES</b>  | N#[Zr]                       |
| <b>Inchl Identifier</b>                                      | InChI=1S/N.Zr                |
| <b>Inchl Key</b>   | ZVWKZXLXHLZXLS-UHFFFAOYSA-N  |
| <b>Signal Word</b>   | N/A                          |
| <b>Hazard Statements</b>                                     | N/A                          |
| <b>Hazard Codes</b>  | N/A                          |
| <b>Risk Codes</b>  | N/A                          |
| <b>Safety Statements</b>                                     | N/A                          |
| <b>Transport Information</b>                                 | N/A                          |

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## SAFETY DATA SHEET

Date Accessed: 04/25/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #25658-42-8

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024

Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## **SECTION 2. HAZARDS IDENTIFICATION**

Classification of the substance or mixture  
Not a hazardous substance or mixture.  
GHS Label elements, including precautionary  
statements  
Not a hazardous substance or mixture.  
Hazards not otherwise classified (HNOC) or not  
covered by GHS-none

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## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula: NZr  
Molecular weight: 105.23 g/mol  
CAS-No.: 25658-42-8  
EC-No.: 247-166-2

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## **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
If inhaled  
If breathed in, move person into fresh air. If not  
breathing, give artificial respiration.  
In case of skin contact  
Wash off with soap and plenty of water.  
In case of eye contact  
Flush eyes with water as a precaution.  
If swallowed  
Never give anything by mouth to an unconscious  
person. Rinse mouth with water.  
Most important symptoms and effects, both acute and  
delayed  
The most important known symptoms and effects are  
described in the labelling (see section 2) and/or in  
section 11  
Indication of any immediate medical attention and  
special treatment needed  
No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Nitrogen oxides (NO<sub>x</sub>)

Nature of decomposition products not known.

Nitrogen oxides (NO<sub>x</sub>), Zirconium oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing Vapors, mist or gas.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance

Form: solid

Odor

No data available

Odor Threshold

No data available

pH

No data available

Melting point/freezing point

2,980 °C (5,396 °F)

Initial boiling point and boiling range

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  
Vapor pressure  
No data available  
Vapor density  
No data available  
Relative density  
7.09 g/mL at 25 °C (77 °F)  
Water solubility  
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  
Explosive properties  
No data available  
Oxidizing properties  
No data available  
Other safety information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
No data available  
Chemical stability  
Stable under recommended storage conditions.  
Possibility of hazardous reactions  
No data available  
Conditions to avoid  
No data available  
Incompatible materials  
Strong oxidizing agents, acids  
Hazardous decomposition products  
Other decomposition products-No data available  
In the event of fire: see section 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity  
No data available

Inhalation: No data available  
Dermal: No data available  
No data available  
Skin corrosion/irritation  
No data available  
Serious eye damage/eye irritation  
No data available  
Respiratory or skin sensitisation  
No data available  
Germ cell mutagenicity  
No data available  
Carcinogenicity  
IARC:  
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
NTP:  
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA:  
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
Reproductive toxicity  
No data available  
No data available  
Specific target organ toxicity -single exposure  
No data available  
Specific target organ toxicity -repeated exposure  
No data available  
Aspiration hazard  
No data available  
Additional Information  
RTECS: Not available

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
No data available  
Persistence and degradability  
No data available  
Bioaccumulative potential  
No data available  
Mobility in soil  
No data available  
Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  
Other adverse effects  
No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a  
licensed disposal company.

Contaminated packaging

Dispose of as unused product.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

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## **SECTION 15. REGULATORY INFORMATION**

SARA 302 Components

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

SARA 313 Components

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

Zirconium nitride

CAS-No.

25658-42-8

New Jersey Right To Know Components

Zirconium nitride

CAS-No.

25658-42-8

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.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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