



# PRODUCT INFORMATION SHEET

**MATERION**

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

### 1.1. Product identifier

|                              |                             |
|------------------------------|-----------------------------|
| <b>Name of the substance</b> | Zinc pieces                 |
| <b>Identification number</b> | 030-001-01-9 (Index number) |
| <b>Registration number</b>   | -                           |
| <b>Document number</b>       | 2DU                         |
| <b>Synonyms</b>              | ZINC                        |
| <b>Materion Code</b>         | 2DU                         |
| <b>Issue date</b>            | 08-August-2013              |
| <b>Revision date</b>         | 15-January-2018             |
| <b>Supersedes date</b>       | 14-July-2015                |
| <b>Version number</b>        | 04                          |

### 1.3. Details of the supplier of the product information 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

### 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

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

##### Health hazards

Acute toxicity, oral Category 4

##### Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard Category 1

Hazardous to the aquatic environment, long-term aquatic hazard Category 1

#### Hazard summary

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. High concentrations of dust may form explosive mixture with air.

### 2.2. Label elements

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

|                          |  |
|--------------------------|--|
| <b>Contains:</b>         | zinc   |
| <b>Hazard pictograms</b> | None.  |
| <b>Signal word</b>       | Warning  |
| <b>Hazard statements</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. May form combustible dust concentrations in air. Water reactive substance. |

## Precautionary statements

|                   |   |
|-------------------|---|
| <b>Prevention</b> | Minimise dust generation and accumulation.  |
| <b>Response</b>   | Not available.  |
| <b>Storage</b>    | Not available.  |
| <b>Disposal</b>   |   |
| P501              | Dispose of contents/container in accordance with local/regional/national/international regulations. |

**Supplemental label information** None.

**2.3. Other hazards** None known.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### General information

| Chemical name          | %   | CAS-No. / EC No.       | REACH Registration No. | Index No.    | Notes |
|------------------------|-----|------------------------|------------------------|--------------|-------|
| zinc                   | 100 | 7440-66-6<br>231-175-3 | -                      | 030-001-01-9 |       |
| <b>Classification:</b> | -   |                        |                        |              |       |

## SECTION 4: First aid measures

**General information** In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 4.1. Description of first aid measures

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Move to fresh air. Call a physician if symptoms develop or persist.  |
| <b>Skin contact</b> | Get medical attention if irritation develops and persists.   |
| <b>Eye contact</b>  | Rinse with water. Get medical attention if irritation develops and persists.   |
| <b>Ingestion</b>    | Rinse mouth. Get medical advice/attention if you feel unwell. IF SWALLOWED: Call a POISON CENTRE or doctor/physician 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** Provide general supportive measures and treat symptomatically. Treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## SECTION 5: Firefighting measures

**General fire hazards** Not available.

### 5.1. Extinguishing media

|                                       |   |
|---------------------------------------|---|
| <b>Suitable extinguishing media</b>   | Powder. Dry sand.   |
| <b>Unsuitable extinguishing media</b> | Water. Do not use water jet as an extinguisher, as this will spread the fire. Use fire-extinguishing media appropriate for surrounding materials. |

**5.2. Special hazards arising from the substance or mixture** Not a fire hazard.

### 5.3. Advice for firefighters

|  |  |
|--|--|
| <b>Special protective equipment for firefighters</b> | Wear suitable protective equipment.          |
| <b>Special firefighting procedures</b>               | Water runoff can cause environmental damage. |

**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

**For non-emergency personnel** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

|  |   |
|--|---|
| <b>For emergency responders</b>                                  | Keep unnecessary personnel away.  |
| <b>6.2. Environmental precautions</b>                            | Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.                                |
| <b>6.3. Methods and material for containment and cleaning up</b> | Stop the flow of material, if this is without risk. Collect spillage. Do not get water on spilled substance or inside containers. Prevent product from entering drains.<br><br>Never return spills to original containers for re-use. |
| <b>6.4. Reference to other sections</b>                          | Not available.  |

## SECTION 7: Handling and storage

|  |   |
|--|---|
| <b>7.1. Precautions for safe handling</b>                                | Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. |
| <b>7.2. Conditions for safe storage, including any incompatibilities</b> | Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a dry place.  |
| <b>7.3. Specific end use(s)</b>  | Not available.  |

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

| Material             | Type | Value                 | Form                 |
|----------------------|------|-----------------------|----------------------|
| zinc (CAS 7440-66-6) | TWA  | 2 mg/m <sup>3</sup>   | Inhalable fraction.  |
|                      |      | 0,1 mg/m <sup>3</sup> | Respirable fraction. |

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

| Material             | Type | Value                 | Form                 |
|----------------------|------|-----------------------|----------------------|
| zinc (CAS 7440-66-6) | TWA  | 2 mg/m <sup>3</sup>   | Inhalable fraction.  |
|                      |      | 0,1 mg/m <sup>3</sup> | Respirable fraction. |

**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 (typically 10 air changes per hour) 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 eye/face protection.

#### Skin protection

- **Hand protection** Not normally needed.

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

**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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

|  |   |
|--|---|
| <b>Hygiene measures</b>                | When using, do not eat, drink or smoke. 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. |
| <b>Environmental exposure controls</b> | Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.  |

## SECTION 9: Physical and chemical properties

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

|   |                          |
|---|--------------------------|
| <b>Appearance</b>                                   | Solid.                   |
| <b>Physical state</b>                               | Not available.           |
| <b>Form</b>   | Not available.           |
| <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>                 | 419,53 °C (787,15 °F)    |
| <b>Initial boiling point and boiling range</b>      | 907 °C (1664,6 °F)       |
| <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 at 25 °C |
| <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 available.           |
| <b>Oxidising properties</b>                         | Not available.           |

### 9.2. Other information

|                          |   |
|--------------------------|---|
| <b>Density</b>           | 7,13 g/cm <sup>3</sup> estimated at 25 °C |
| <b>Molecular formula</b> | Zn  |
| <b>Molecular weight</b>  | 65,38 g/mol                               |
| <b>Specific gravity</b>  | 7,13 at 25 °C                             |

## 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>                | 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. |
|----------------------------|--|

## Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Prolonged inhalation may be harmful.                             |
| <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>    | Harmful if swallowed.  |
| <b>Symptoms</b>     | Exposure may cause temporary irritation, redness, or discomfort. |

### 11.1. Information on toxicological effects

|  |   |
|--|---|
| <b>Acute toxicity</b>                    | Harmful if swallowed.   |
| <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 lack of data the classification is not possible. Not likely, due to the form of the product. |
| <b>Mixture versus substance information</b>               | No information available.   |
| <b>Other information</b>                                  | Not available.  |

## SECTION 12: Ecological information

**12.1. Toxicity** Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

| Product              | Species | Test Results   |
|----------------------|---------|--|
| zinc (CAS 7440-66-6) |         |  |
| <b>Aquatic</b>       |         |  |
| Crustacea            | EC50    | Water flea (Daphnia magna) 2,8 mg/l, 48 hours                            |
| Fish                 | LC50    | Rainbow trout, donaldson trout (Oncorhynchus mykiss) 0,56 mg/l, 96 hours |

\* Estimates for product may be based on additional component data not shown.

|  |   |
|--|---|
| <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. |

### 12.7. Additional information

#### Estonia Dangerous substances in groundwater Data

|                      |  |
|----------------------|--|
| zinc (CAS 7440-66-6) | Zinc (Zn) 50 ug/l<br>Zinc (Zn) 5000 ug/l |
|----------------------|--|

#### Estonia Dangerous substances in soil Data

|                      |   |
|----------------------|---|
| zinc (CAS 7440-66-6) | Zinc (Zn) 1000 mg/kg<br>Zinc (Zn) 200 mg/kg |
|----------------------|---|

**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>       | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.   |
| <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. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| <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****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**

zinc (CAS 7440-66-6)

**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**

zinc (CAS 7440-66-6)

**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**

zinc (CAS 7440-66-6)

**Other regulations**

The product is classified and labelled in accordance with EC directives or respective national laws.

**National regulations**

Follow national regulation for work with chemical agents.

**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**

To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is not in the form of a Safety Data Sheet (SDS), but is actually a voluntary Product Information Sheet closely following the guidelines of the Safety Data Sheet – COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 (REACH/SDS). The information in the sheet was written based on the best knowledge and experience currently available.