



# PRODUCT INFORMATION SHEET

**MATERION**

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

### 1.1. Product identifier

|   |   |
|---|---|
| <b>Trade name or designation of the mixture</b> | Alumina Ceramic   |
| <b>Registration number</b>                      | -   |
| <b>Document number</b>                          | C21   |
| <b>Synonyms</b>                                 | Aluminum Oxide, Alumina, Al <sub>2</sub> O <sub>3</sub> , Durox AL, Durox UHP |
| <b>Issue date</b>                               | 21-July-2017  |
| <b>Version number</b>                           | 03  |
| <b>Revision date</b>                            | 28-April-2021   |
| <b>Supersedes date</b>                          | 13-January-2021   |

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

#### Supplier

**Company name** Materion Brush Inc.  
**Address** 6070 Parkland Boulevard  
Mayfield Heights, OH 44124  
United States

#### Division

**Telephone** 1.216.383.4019  
**e-mail** ehs@materion.com  
**Contact person** Theodore Knudson

**1.4. Emergency telephone number** 1.216.383.4019

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

**Identified uses** Industrial uses: Uses of substances as such or in preparations at industrial sites  
Manufacture of computer, electronic and optical products, electrical equipment  
General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment  
Scientific research and development

**Uses advised against** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
Consumer uses: Private households (= general public = consumers)

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

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**Address** 6070 Parkland Boulevard  
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**1.4. Emergency telephone number** 1.216.383.4019

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

#### Health hazards

|  |   |  |
|--|---|--|
| Carcinogenicity                                  | Category 2                              |  |
| Specific target organ toxicity - single exposure | Category 3 respiratory tract irritation | H335 - May cause respiratory irritation. |

**Hazard summary** Exposure to powder or dusts may be irritating to eyes, nose and throat.

## 2.2. Label elements

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

**Contains:** Aluminium oxide, Calcium carbonate, Kaolin, Talc

#### Hazard pictograms



**Signal word** Warning

#### Hazard statements

H335 May cause respiratory irritation.

#### Precautionary statements

##### Prevention

P261 Observe good industrial hygiene practices.  
Avoid breathing dust/fume.  
P271 Use only outdoors or in a well-ventilated area.

##### Response

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P304 + P312 IF INHALED: Call a POISON CENTRE/doctor if you feel unwell.

##### Storage

P405 Store locked up.

##### Disposal

Dispose of waste and residues in accordance with local authority requirements.

#### Supplemental label information

For further information, please contact the Product Stewardship Department at +1.800.862.4118.

**2.3. Other hazards** None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

| Chemical name            | %         | CAS-No. / EC No.        | REACH Registration No. | Index No. | Notes |
|--------------------------|-----------|-------------------------|------------------------|-----------|-------|
| Aluminium oxide          | 94 - 99,9 | 1344-28-1<br>215-691-6  | -                      | -         |       |
| <b>Classification:</b> - |           |                         |                        |           |       |
| Calcium carbonate        | 0 - 2     | 1317-65-3<br>215-279-6  | -                      | -         |       |
| <b>Classification:</b> - |           |                         |                        |           |       |
| Kaolin                   | 0 - 2     | 1332-58-7<br>310-194-1  | -                      | -         |       |
| <b>Classification:</b> - |           |                         |                        |           |       |
| Talc                     | 0 - 2     | 14807-96-6<br>238-877-9 | -                      | -         |       |
| <b>Classification:</b> - |           |                         |                        |           |       |

## 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

Wash off with soap and water. Get medical attention if irritation develops and persists.

##### Eye contact

Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

##### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

#### 4.2. Most important symptoms and effects, both acute and delayed

Dusts may irritate the respiratory tract, skin and eyes.

**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** Do not use water jet as an extinguisher, as this will spread the fire.

**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** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Special firefighting procedures** Move containers from fire area if you can do so without risk.

**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** Not available.

**For emergency responders** Keep unnecessary personnel away.

**6.2. Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up** Stop the flow of material, if this is without risk. Collect dust using a vacuum cleaner equipped with HEPA filter.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

**6.4. Reference to other sections** Not available.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.

**7.2. Conditions for safe storage, including any incompatibilities** Store in original tightly closed container. Store in a well-ventilated place.

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

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

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

| Components                        | Type | Value                 | Form                        |
|-----------------------------------|------|-----------------------|-----------------------------|
| Aluminium oxide (CAS 1344-28-1)   | TWA  | 4 mg/m <sup>3</sup>   | Inhalable fraction.         |
|                                   |      | 1,5 mg/m <sup>3</sup> | Respirable fraction.        |
|                                   |      | 0,1 mg/m <sup>3</sup> |                             |
| Calcium carbonate (CAS 1317-65-3) | TWA  | 10 mg/m <sup>3</sup>  |                             |
| Kaolin (CAS 1332-58-7)            | TWA  | 2 mg/m <sup>3</sup>   | Respirable aerosol fraction |

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

| Components            | Type | Value                | Form                        |
|-----------------------|------|----------------------|-----------------------------|
| Talc (CAS 14807-96-6) | TWA  | 2 mg/m <sup>3</sup>  | Respirable aerosol fraction |
|                       |      | 2 mg/m <sup>3</sup>  | Respirable fraction.        |
|                       |      | 2 mg/m <sup>3</sup>  | Respirable fraction.        |
|                       |      | 10 mg/m <sup>3</sup> | Aerosol                     |
|                       |      | 10 mg/m <sup>3</sup> |                             |
|                       |      | 10 mg/m <sup>3</sup> | Total                       |
|                       |      | 10 mg/m <sup>3</sup> | Dust.                       |
|                       |      | 2 mg/m <sup>3</sup>  | Respirable fraction.        |
|                       |      | 2 mg/m <sup>3</sup>  | Respirable fraction.        |
|                       |      | 10 mg/m <sup>3</sup> | Total                       |

**Biological limit values**

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

**Recommended monitoring procedures**

Not available.

**Derived no effect levels (DNELs)**

Not available.

**Predicted no effect concentrations (PNECs)**

Not available.

**8.2. Exposure controls**

**Appropriate engineering controls**

**VENTILATION:** 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.

Whenever possible, the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne particulate. Where utilized, exhaust inlets to the ventilation system must be positioned as close as possible to the source of airborne generation. Avoid disruption of the airflow in the area of a local exhaust inlet by equipment such as a man-cooling fan. Check ventilation equipment regularly to ensure it is functioning properly. Provide training on the use and operation of ventilation to all users. Use qualified professionals to design and install ventilation systems.

**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 approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate dust, mist or fume.

**Skin protection**

**- Hand protection**

Wear gloves to prevent contact with particulate or solutions. Wear gloves to prevent metal cuts and skin abrasions during handling.

**- Other**

Protective overgarments or work clothing must be worn by persons who may become contaminated with particulate during activities.

**Respiratory protection**

When airborne exposures exceed or have the potential to exceed the occupational exposure limits, approved respirators must be used as specified by an Industrial Hygienist or other qualified professional. Respirator users must be medically evaluated to determine if they are physically capable of wearing a respirator. Quantitative and/or qualitative fit testing and respirator training must be satisfactorily completed by all personnel prior to respirator use. Users of tight fitting respirators must be clean shaven on those areas of the face where the respirator seal contacts the face. Use pressure-demand airline respirators when performing jobs with high potential exposures such as changing filters in a baghouse air cleaning device.

**Thermal hazards**

Not applicable.

**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**

Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

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

#### Appearance

|   |                                     |
|---|-------------------------------------|
| <b>Physical state</b>                               | Solid.                              |
| <b>Form</b>   | Powder. Various shapes.             |
| <b>Colour</b>                                       | White. Off-white.                   |
| <b>Odour</b>  | Not applicable.                     |
| <b>Odour threshold</b>                              | Not applicable.                     |
| <b>pH</b>   | Not applicable.                     |
| <b>Melting point/freezing point</b>                 | 2050 °C (3722 °F) / Not applicable. |
| <b>Initial boiling point and boiling range</b>      | 2977 °C (5390,6 °F) estimated       |
| <b>Flash point</b>                                  | Not applicable.                     |
| <b>Evaporation rate</b>                             | Not applicable.                     |
| <b>Flammability (solid, gas)</b>                    | Not applicable.                     |
| <b>Upper/lower flammability or explosive limits</b> |                                     |
| <b>Flammability limit - lower (%)</b>               | Not applicable.                     |
| <b>Flammability limit - upper (%)</b>               | Not applicable.                     |
| <b>Explosive limit - lower (%)</b>                  | Not applicable.                     |
| <b>Explosive limit – upper (%)</b>                  | Not applicable.                     |

|  |                       |
|--|-----------------------|
| <b>Vapour pressure</b>                         | 0,00001 hPa estimated |
| <b>Vapour density</b>                          | Not applicable.       |
| <b>Relative density</b>                        | Not applicable.       |
| <b>Solubility(ies)</b>                         |                       |
| <b>Solubility (water)</b>                      | Not applicable.       |
| <b>Solubility (other)</b>                      | Not applicable.       |
| <b>Partition coefficient (n-octanol/water)</b> | Not available.        |
| <b>Auto-ignition temperature</b>               | Not applicable.       |
| <b>Decomposition temperature</b>               | Not applicable.       |
| <b>Viscosity</b>                               | Not applicable.       |
| <b>Explosive properties</b>                    | Not explosive.        |
| <b>Oxidising properties</b>                    | Not oxidising.        |

#### 9.2. Other information

|                         |                                  |
|-------------------------|----------------------------------|
| <b>Density</b>          | 3,93 g/cm <sup>3</sup> estimated |
| <b>Specific gravity</b> | 3,93 estimated                   |

## SECTION 10: Stability and reactivity

|   |   |
|---|---|
| <b>10.1. Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <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>             | Acids. Chlorine.  |
| <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>                               | Dust may irritate respiratory system. Prolonged inhalation may be harmful.   |

|                     |   |
|---------------------|---|
| <b>Skin contact</b> | Dust or powder may irritate the skin.   |
| <b>Eye contact</b>  | Dust may irritate the eyes.   |
| <b>Ingestion</b>    | May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure. |

**Symptoms** Dusts may irritate the respiratory tract, skin and eyes.

### 11.1. Information on toxicological effects

|  |   |
|--|---|
| <b>Acute toxicity</b>                    | No data available.  |
| <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. |

### IARC Monographs. Overall Evaluation of Carcinogenicity

|                       |  |
|-----------------------|--|
| Talc (CAS 14807-96-6) | 2B Possibly carcinogenic to humans.<br>3 Not classifiable as to carcinogenicity to humans. |
|-----------------------|--|

|   |   |
|---|---|
| <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>                                  | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. |
| <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

#### EU regulations

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

Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), 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**

Aluminium oxide (CAS 1344-28-1)

Kaolin (CAS 1332-58-7)

Talc (CAS 14807-96-6)

**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**

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 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.

|   |   |
|---|---|
| <b>Information on evaluation method leading to the classification of mixture</b>    | The classification for health and environmental hazards is derived by a combination of calculator methods and test data, if available.  |
| <b>Full text of any H-statements not written out in full under Sections 2 to 15</b> | None.   |
| <b>Revision information</b>   | None.   |
| <b>Training information</b>   | Follow training instructions when handling this material.   |
| <b>Disclaimer</b>   | <p>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.</p> <p>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).</p> |