

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.1 Revision Date 13.06.2014

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

#### 1.1 Product identifiers

Product name : Aluminum oxide

Product Number : 319767

Brand : Sigma-Aldrich

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 1344-28-1

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company :

#### 1.4 Emergency telephone number

Emergency Phone # :

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.  
This substance is not classified as dangerous according to Directive 67/548/EEC.

#### 2.2 Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

#### 2.3 Other hazards - none

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Formula :  $\text{Al}_2\text{O}_3$

Molecular Weight : 101,96 g/mol

CAS-No. : 1344-28-1

EC-No. : 215-691-6

No components need to be disclosed according to the applicable regulations.

### SECTION 4: First aid measures

#### 4.1 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.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

no data available

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**5.2 Special hazards arising from the substance or mixture**

Aluminum oxide

**5.3 Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information**

Do not use halocarbon extinguishers. The product itself does not burn.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

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

For personal protection see section 8.

**6.2 Environmental precautions**

No special environmental precautions required.

**6.3 Methods and materials for containment and cleaning up**

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

**6.4 Reference to other sections**

For disposal see section 13.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

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

strongly hygroscopic

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

Components with workplace control parameters

**8.2 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### 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

No special environmental precautions required.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |  |                               |
|--|-------------------------------|
| a) Appearance                              | Form: powder                  |
| b) Odour                                   | no data available             |
| c) Odour Threshold                         | no data available             |
| d) pH                                      | 9,4 - 10,1 at 20 °C           |
| e) Melting point/freezing point            | Melting point/range: 2.040 °C |
| f) Initial boiling point and boiling range | 2.980 °C                      |
| g) Flash point                             | no data available             |
| h) Evaporation rate                        | no data available             |

- |    |  |                         |
|----|--|-------------------------|
| i) | Flammability (solid, gas)                    | no data available       |
| j) | Upper/lower flammability or explosive limits | no data available       |
| k) | Vapour pressure                              | 1 hPa at 2.158 °C       |
| l) | Vapour density                               | no data available       |
| m) | Relative density                             | 4,000 g/cm <sup>3</sup> |
| n) | Water solubility                             | insoluble               |
| o) | Partition coefficient: n-octanol/water       | no data available       |
| p) | Auto-ignition temperature                    | no data available       |
| q) | Decomposition temperature                    | no data available       |
| r) | Viscosity                                    | no data available       |
| s) | Explosive properties                         | no data available       |
| t) | Oxidizing properties                         | no data available       |

**9.2 Other safety information**  
no data available

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**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

no data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

no data available

**10.4 Conditions to avoid**

Exposure to moisture.

**10.5 Incompatible materials**

Strong acids, Strong bases, Chlorine trifluoride, Ethylene oxide, Halogenated hydrocarbon, Oxygen difluoride, Sodium nitrate, Vinyl compounds

**10.6 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**

**11.1 Information on toxicological effects**

**Acute toxicity**

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**

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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.

**Reproductive toxicity**

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: BD1200000

Cough, chest pain, Difficulty in breathing, Gastrointestinal disturbance

Liver - Irregularities - Based on Human Evidence

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**SECTION 12: Ecological information****12.1 Toxicity**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

no data available

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**SECTION 13: Disposal considerations****13.1 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****14.1 UN number**

ADR/RID: -

IMDG: -

IATA: -

**14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

<b>14.3</b>	<b>Transport hazard class(es)</b> ADR/RID: -	IMDG: -	IATA: -
<b>14.4</b>	<b>Packaging group</b> ADR/RID: -	IMDG: -	IATA: -
<b>14.5</b>	<b>Environmental hazards</b> ADR/RID: no	IMDG Marine pollutant: no	IATA: no
<b>14.6</b>	<b>Special precautions for user</b> no data available		

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## no data available

For this product a chemical safety assessment was not carried out

### Further information

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