

SAFETY DATA SHEET

1. Identification

Product identifier: AEROXIDE® Alu 130

Other means of identification

Recommended use: Paper
Coating agent

Recommended restrictions: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Operations GmbH
Rellinghauser Str. 1-11
45128 Essen
Germany

Telephone : +49 6181 59 4787

E-mail : sds-hu@evonik.com

Emergency telephone number:

24-Hour Health : +49 7623 919191
Emergency

2. Hazard(s) identification

Classification according to GHS

Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary Statements : Not applicable

Other hazards: No data available.

3. Composition/information on ingredients

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Aluminium oxide		1344-28-1	

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

Inhalation:	In case product dust is released: Possible discomfort: cough, sneezing If necessary: Provide with fresh air.
Skin Contact:	Wash off with plenty of water and soap.
Eye contact:	Possible discomfort is due to foreign substance effect. Rinse thoroughly with plenty of water keeping eyelid open. In case of persistent discomfort: Consult an ophthalmologist.
Ingestion:	Have the mouth rinsed with water. After absorbing large amounts of substance / In case of discomfort: Supply with medical care.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	No data available.
Hazards:	None known.

Indication of immediate medical attention and special treatment needed

Treatment:	After absorbing large amounts of substance: administration of activated charcoal. Acceleration of gastrointestinal passage
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5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, CO ₂ , dry powder. Adapt fire-extinguishing measures to surroundings
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Unsuitable extinguishing media:	Do not use a solid water stream as it may scatter and spread fire.
Special hazards arising from the substance or mixture:	None known.
Special protective equipment and precautions for firefighters	
Special fire fighting procedures:	Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters:	In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	Sweep up or vacuum up spillage and collect in suitable container for disposal.
Environmental Precautions:	Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

7. Handling and storage

Handling

Technical measures:	Ensure suitable suction/aeration at the work place and with operational machinery. Local ventilation if necessary.
Local/Total ventilation:	No data available.
Safe handling advice:	If necessary: Local ventilation. Handle in accordance with good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Take precautionary measures against static
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discharges. Keep in a dry, cool place.

Safe packaging materials:

No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Observe national threshold limit values.

Biological Limit Values

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

Appropriate Engineering Controls

Ensure suitable suction/aeration at the work place and with operational machinery. Local ventilation if necessary. see also section 7.

Individual protection measures, such as personal protective equipment

General information:

No data available.

Eye/face protection:

Safety glasses with side shields
If dust occurs: basket-shaped glasses

Hand Protection:

Additional Information: Protective gloves, nitrile rubber (NBR), butyl rubber, PVC
Additional Information: The data about break through time/strength of material is not valid for undissolved solids/dust.

Other:

No special protective equipment required.

Respiratory Protection:

No special protective equipment required. If dust occurs:
Dust mask with P2 particle filter

Hygiene measures:

When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. Avoid clothing from being contaminated with the product. Wash contaminated clothing after use. To ensure ideal skin protection: use super fatted soaps and skin cream for skin care.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:

solid

Form:

Powder

Color:

White

Odor:

Odorless

Odor Threshold:

Not applicable

Melting Point:	Approximate 2.050 °C/3.722 °F
Boiling Point:	No data available.
Flammability:	Not applicable
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	Not applicable
Explosive limit - lower:	Not applicable
Flash Point:	Not applicable (solid)
Auto-ignition temperature:	Not applicable
Decomposition Temperature:	> 2.000 °C/> 3.632 °F
pH:	4 - 6 Method: DIN / ISO 787 / 9 40 g/l 20 °C/68 °F Suspension
Viscosity	
Dynamic viscosity:	Not applicable (solid)
Kinematic viscosity:	Not applicable (solid)
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	hardly soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable
Vapor pressure:	Not applicable
Relative density:	No data available.
Density:	Approximate 3,27 g/cm ³ 20 °C/68 °F
Bulk density:	No data available.
Vapor density (air=1):	No data available.
Other information	
Explosive properties:	Not to be expected in view of the structure
Oxidizing properties:	Not to be expected in view of the structure
Pyrophoric properties:	Not applicable
Peroxides:	Not applicable
Dust explosion properties:	Not dust explosive
Evaporation Rate:	Not applicable
Minimum ignition energy:	Not applicable

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No hazardous reactions are known if properly handled and stored.
Conditions to avoid:	Avoid dust formation.
Incompatible Materials:	Strong acids and strong bases
Hazardous Decomposition Products:	None known. Stable under normal conditions. Product will not undergo hazardous polymerization.

11. Toxicological information

General information:	If the recommended workplace concentration of the product is exceeded the respiratory tract may be mechanically overcharged as with other fine dusts.
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Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.
Ingestion:	Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50, Rat, Female, Male, > 10.000 mg/kg, OECD 401
Based on available data, the classification criteria are not met.

Components:
Aluminium oxide LD 50, Rat, Female, Male, > 10.000 mg/kg, OECD 401

Dermal

Product: Not classified for acute toxicity based on available data.

Components:
Aluminium oxide Not toxic after single exposure, Not classified for acute toxicity based on available data.

Inhalation

Product: LC 50, Rat, Female, Male, 4 h, > 2,3 mg/l, OECD 403, Not toxic after single exposure, No deaths observed., Dust and mist
Based on available data, the classification criteria are not met.

Components:
Aluminium oxide Dust and mist, Not toxic after single exposure, No classification
Vapour, Not toxic after single exposure, Not applicable

Repeated dose toxicity

Product: NOAEL Rat, Female, Male, Oral, 90 d, daily, 1.000 mg/kg, LOAEL Rat, Female, Male, Oral, 90 d, daily, 1.000 mg/kg, (analogy)
NOAEC, Rat, Inhalation - dust and mist, 90 d, 5 days/weeks, 6 hours/day, 70 mg/m³, Target Organ(s): lungs / sediments in the lungs, lungs / no evidence of fibrosis, no pathological changes

Components:

Aluminium oxide NOAEL Rat, Female, Male, Oral, 90 d, daily, 1.000 mg/kg, LOAEL Rat, Female, Male, Oral, 90 d, daily, 1.000 mg/kg, (analogy)
NOAEC, Rat, Inhalation - dust and mist, 90 d, 5 days/weeks, 6 hours/day, 70 mg/m³, Target Organ(s): lungs / sediments in the lungs, lungs / no evidence of fibrosis, no pathological changes

Skin Corrosion/Irritation

Product: Not irritant, OECD 404, (Rabbit), Based on available data, the classification criteria are not met.

Components:

Aluminium oxide Not irritating, OECD 404, Rabbit

Serious Eye Damage/Eye Irritation

Product: Not irritant, OECD 405, Rabbit, Based on available data, the classification criteria are not met.

Components:

Aluminium oxide Not irritating, OECD 405, Rabbit

Respiratory or Skin Sensitization

Product: Maximization Test, OECD 406, Guinea Pig
Draize-test, Guinea Pig, Based on available data, the classification criteria are not met.

Components:

Aluminium oxide Draize-test, Guinea Pig, Not a skin sensitizer.
Maximization Test, OECD 406, Guinea Pig, Not a skin sensitizer.

Carcinogenicity

Product: No evidence that cancer may be caused.

Components:

Aluminium oxide No evidence that cancer may be caused.

Germ Cell Mutagenicity

no evidence of mutagenic effects

In vitro

Product: gene mutation test, OECD 471: , negative
gene mutation test, OECD 476: , negative, (analogy)

Components:

Aluminium oxide gene mutation test, OECD 471: , negative
gene mutation test, OECD 476: , negative, (analogy)

In vivo

Product: Micronucleus test, OECD 474, Oral, Rat, Male, negative, (analogy)

Components:

Aluminium oxide Micronucleus test, OECD 474, Oral, Rat, Male, negative, (analogy)

Reproductive toxicity

Product: no evidence of reproductiontoxic properties

Components:
 Aluminium oxide no evidence of reproductiontoxic properties

Specific Target Organ Toxicity - Single Exposure

Product: no evidence for hazardous properties

Components:
 Aluminium oxide no evidence for hazardous properties

Specific Target Organ Toxicity - Repeated Exposure

Product: no evidence for hazardous properties

Components:
 Aluminium oxide no evidence for hazardous properties

Aspiration Hazard

Product: Not applicable

Components:
 Aluminium oxide Not applicable

Information on health hazards

Other hazards

Product: Based on available data, the classification criteria are not met.;

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50, Salmo trutta, 96 h, > 100 mg/l, Literature

Components:
 Aluminium oxide LC 50, Salmo trutta, 96 h, > 100 mg/l, Literature

Aquatic Invertebrates

Product: EC 50, Daphnia magna, 48 h, > 100 mg/l, Literature

Components:
 Aluminium oxide EC 50, Daphnia magna, 48 h, > 100 mg/l, Literature

Toxicity to Aquatic Plants

Product: EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): > 100 mg/l Literature

Components:
 Aluminium oxide EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): > 100 mg/l Literature

Toxicity to microorganisms

Product:	EC 10, activated sludge, 3 h, 1.000 mg/l, OECD 209, (analogy) EC 10, activated sludge, 3 h, > 200 mg/l, OECD 209
Components:	
Aluminium oxide	EC 10, activated sludge, 3 h, 1.000 mg/l, OECD 209, (analogy) EC 10, activated sludge, 3 h, > 200 mg/l, OECD 209

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Aluminium oxide	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
Aluminium oxide	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Aluminium oxide	No data available.

Toxicity to microorganisms

Product:	EC 10, activated sludge, 3 h, 1.000 mg/l, OECD 209, (analogy) EC 10, activated sludge, 3 h, > 200 mg/l, OECD 209
Components:	
Aluminium oxide	EC 10, activated sludge, 3 h, 1.000 mg/l, OECD 209, (analogy) EC 10, activated sludge, 3 h, > 200 mg/l, OECD 209

Persistence and Degradability

Biodegradation

Product:	The methods for determining biodegradability are not applicable to inorganic substances.
Components:	
Aluminium oxide	The methods for determining biodegradability are not applicable to inorganic substances.

BOD/COD Ratio

Product:	No data available.
Components:	
Aluminium oxide	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	Not to be expected.
Components:	
Aluminium oxide	Not to be expected.

Partition Coefficient n-octanol / water (log Kow)

Product: Not applicable
Components:
Aluminium oxide , Not applicable

Mobility in soil:

Product No remarkable mobility in soil is to be expected.
Components:
Aluminium oxide No remarkable mobility in soil is to be expected.

Other adverse effects:

Other hazards

Product: The data we have at our disposal do not necessitate identification concerning environmental hazard.

13. Disposal considerations

Disposal methods: Review all local, state and federal regulations concerning health and pollution for appropriate disposal procedures.

Contaminated Packaging: Offer rinsed packaging material to local recycling facilities. Other countries: observe the national regulations.

14. Transport information

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

16. Other information, including date of preparation or last revision**Issue Date:** 13.09.2019**Version #:** 1.7**Abbreviations and acronyms:**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further Information: No data available.**Revision Information:** Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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