DADCO

Safety Data Sheet
Aluminium Hydroxide

according to Regulation (EC) No. 1907/2006

This generic Safety Data Sheet has been provided for information purposes only, since according to present legislation the producer is under no obligation to provide any SDS for this material.

1. Identification of the substance/preparation and of the company/undertaking

1.1 Product identifier

Aluminium hydroxide, Aluminium hydrate

Additional trade names: Hydrate

Article code: reference to materials standards

REACH Registration No.: 01-2119529246-39-0009

1.2 Use of the substance/ the preparation

Industrial use, further processing into a number of articles/products

Aluminium oxide production

1.3 Manufacturer / Supplier:

1.3.1 Manufacturer

Company:	Aluminium Oxid Stade GmbH
Street:	Johann-Rathje-Köser-Straße
Location:	21683 Stade-Bützfleth
Country:	Germany
Phone:	+49 4146 92641
Fax:	+49 4146 92377

1.3.2 Supplier

Company:	Dadco (Suisse) S.A.
Street:	Av. d'Ouchy 61
Location:	1006 Lausanne
Country:	Switzerland
Phone:	+41 21 6131370
Fax:	+41 21 6013863

1.3.3 Further information obtainable from:

Phone: + 49 4146 92393

E-Mail (expert): b.petersen@aos-stade.de

1.3.4 Information in case of emergency

Call national emergency number

2. Hazards Identification

2.1 Classification

Not hazardous.

2.2 Information concerning particular hazards for human and environment:

Not a health hazard under normal conditions of use and as delivered.

High dust concentration may cause mechanical irritation of the eyes, skin and respiratory trac**t**

Releases humidity on decomposition, do not heat in enclosed containers

3. Composition/information on ingredients

3.1 Chemical characterisation:

Aluminium hydroxide content of > 95 weight by weight %

3.2 Ingredients:

CAS #	EC #	Component	Concentration %	Classification	R- phrase
21645-51-2	244-492-7	Aluminium hydroxide	> 95	--- ---	--- ---

3.3 Additional information:

Usually supplied to customers in bulk or big bags. Main impurities, iron oxide, calcium oxide, sodium oxide and silica

4. First-aid measures

4.1 General information:

First aide personnel: pay attention to self- protection!

- **After inhalation:**. In case of dust inhalation remove person to ventilated area and keep calm. In case of ongoing discomfort consult a physician
- **After skin contact:**. In case of large exposures wash with soap and water.
- **After eye contact**. If particles comes into contact with eyes treatment for mechanical irritation may be required; flush thoroughly with water, in case of ongoing discomfort consult a physician
- **After swallowing:** Wash mouth with water

4.2 Notes to physician:

None

5. Fire-fighting measures

Not flammable

5.1 Suitable extinguishing agents:

Use extinguishing agents appropriate for surrounding materials.

5.2 For safety reasons unsuitable extinguishing agents:

None

5.3 Special hazards caused by the substance, its products of combustion or resulting gases:

None

5.4 Protective equipment:

Fire fighters should wear approved personal protective equipment for the surrounding fired material

5.5 Additional hints:

6. Accidental release measures

6.1 Person- related safety precautions:

See protection measures listed in section 8.

6.2 Environmental protection measures:

Avoid dispersal of spilled material and runoff. Avoid creating dusty conditions and prevent wind dispersal. Collect material for recycling if possible.

6.3 Measures for cleaning:

Use vacuum cleaner if possible.

6.4 Additional hints:

See section 13

7. Handling and storage

7.1 Handling:

Ensure good ventilation / local exhaust at the workplace in the case of operations generating dust. Avoid creating dusty conditions. Avoid inhalation and skin and eye contact
Wear appropriate personal protective equipment.

7.2 Storage

Requirements to be met by storerooms and receptacles:

Store in dry area.

Additional hints:

None

8. Exposure controls/personal protection

8.1 Exposure limits

Occupational exposure limits (air): generally same as for nuisance dust

Germany
10*/3** mg/m3 (*inhalable dust; ** respirable dust)

Great Britain
10*/4** mg/m3 (*inhalable dust; ** respirable dust)

United States
OSHA 15 mg/m3 (total dust); 5 mg/m3 TWA (respirable fraction)

Some additional EU countries: 10 mg/m^3 (Include national OEL in national language version)

8.2 Exposure controls:

Ensure good ventilation / local exhaust at the workplace in the case of operations generating dust. Avoid work practises which generate dust. Avoid inhalation and eye contact

8.3 Personal protective equipment:

Respiratory equipment: not required under recommended conditions of use. In case dust is generated, use personal protective equipment, dust filter P2 or if fine particles P3.
Use protective goggles and gloves when handling the substance and appropriate work clothes

8.4 Environmental exposure control:

Avoid creating dusty conditions and prevent wind dispersal

9. Physical and chemical properties

9.1 General information:

Physical state:	solid powder
Colour:	white
Odour:	odourless
pH- value:	not relevant
Melting point/Melting range:	Transforms to alumina in temperature range 300 -600°C
Boiling Point/Boiling range:	not relevant
Flash point:	not relevant
Flammability:	not relevant
Explosive properties:	not relevant
Density at 20°C:	2,42 g/cm^3
Solubility in water (20 °C):	almost insoluble
Other physical-chemical properties:	not relevant

9.2 Important information on health and safety and environmental protection: Safety related basic data, methods, comments

10. Stability and reactivity

Stable under normal conditions of use, storage, and transport
When heated undergoes gradual transformation to aluminium oxide and may release steam

10.1 Conditions to be avoided:

None

10.2 Materials to be avoided:

None

10.3 Dangerous decomposition products:

None

11. Toxicological information

11.1 Toxicokinetics, metabolism and distribution:

Oral uptake < 0.1%, nearly insoluble in lung fluids, most aluminium hydroxide absorbed is rapidly excreted through urine, main deposit in body is in bone structure. Used as an antacid and filler for some medicines. Used as adjuvant for some vaccines.

11.2 Acute effects (acute toxicity, irritation and corrosivity):

No acute effects

11.2.1 Acute toxicity:

LD50 (oral):	> 5000mg/kg bwt (rats)
LD50 (dermal):	No effect
LD50 (inhalative):	> 2,3 mg/l (rats)

11.2.2 Specific symptoms in animal tests:

After swallowing:	None
After skin contact:	None
After inhalation:	None

11.2.3 Irritation/Corrosion effects:

Irritant effects on skin:	No effects
Irritant effect on eyes:	No effects

11.3 Sensitisation:

After skin contact:	None
After inhalation:	None
Remarks:	

11.4 Toxicity after repeated intake (sub acute, sub chronic, chronic):

Sub acute oral Toxicity:	None, calculated DNEL 6,85 mg/kg bwt/day
Sub acute inhalative Toxicity:	None, see occupational exposure limits
Calculated DNEL 3,59 mg/m^3	respirable
Assessment:	

11.5 CMR-effects (carcinogenic, mutagenic and reproductive effects)

Carcinogenicity:	None
Mutagenicity:	None
Reproductive toxicity:	None
Assessment of CMR properties:	Not classified for CMR

Product components not listed under IARC/NTP/ACGIH (ingredient carcinogenicity)

11.6 Practical experience:

Observations relevant for classification:	None
Other observations:	None

12. Ecological Information

12.1 Ecotoxicity:

Product/ingredient name	test	result	Species	Exposure
Aluminium hydroxide	Fish – OECD TG 203	>100 mg/l	Salmo trutta	pH 8
Aluminium hydroxide	Daphnia – OECD TG 202	>100mg/l	Daphnia Magna	pH 8
Aluminium hydroxide	Algae – OECD TG 201	>100mg/l	Selenastrum Capricornutum	pH 8

12.2 Mobility:

Not mobile under normal environmental conditions

12.3 Persistence and degradability:

12.3.1 Persistence: Not relevant for metal compounds

12.3.2 Biological degradability: Not degradable

12.4 Bioaccumulative potential: Not bio accumulative

12.5 Long term ecotoxicity: Not classified for ecotoxicity

12.6 Results of PBT assessment: Not relevant for metal compounds

12.7 Other adverse effects: No

12.8 Final assessment:

No acute or chronic classification is appropriate for Al metal massive based on non toxic results below the Ecotoxicity Reference Value (ERV) of tests with aluminium metal, oxide and hydroxide at loadings of 100 mg/L at pH 8-8.5 (maximum solubility of Al expected).
Aluminium in soil or the aquatic environment comes from natural sources. Local sources has an insignificant contribution and impact on environment apart from limited local sources

13. Disposal considerations

13.1 Disposal / Waste (Product):

Dispose of wastes and residues in accordance with local waste regulations

13.2 Packaging:

Not relevant

14. Transport information

Not regulated

15. Regulatory Information

No classification or special regulations. Follow general rules for handling, transport and waste management.
Chemical Safety Assessment carried out.
Water hazard class: not hazardous to waters.

16. Other information

In dealing with chemicals the national laws and regulation must be observed and applied.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship

Recommended limitations of use by manufacturer:

For industrial use and as component in consumer products

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Abbreviations and acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration (US)
ADR:	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID:	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International Transport of Dangerous Goods by Rail)
IMDG:	International Maritime Code for Dangerous Goods
IATA:	International Air Transport Association
IATA-DGR:	Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO:	International Civil Aviation Organization
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
EINECS:	European Inventory of Existing Commercial Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
Bwt	bodyweight
PNEC	Potential No Effect Concentration
DNEL	Derived No Effect Level
DOC	Dissolved Organic Compounds