

Naprotec LLC  
37415 Chattanooga, TN

Date printed 02.03.2020, Revision 08.10.2019

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

### 1.1 Product identifier

**APYRAL®**

**Valid for all product variants**

IUPAC	Aluminium hydroxide
EINECS/ELINCS	244-492-7
CAS	21645-51-2

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

#### 1.2.1 Relevant uses

Additive, flame retardant, filler, pigment, ground chemical, health care, personal care, viscosity adjustor

#### 1.2.2 Uses advised against

None known.

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

Company	Naprotec LLC 78 Bob Ray Rd. 37415 Chattanooga, TN / USA Phone +49 (0) 9431 53 -0 (Nabaltec AG) E-mail info@nabaltec.de
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#### Address enquiries to

Technical information	info@nabaltec.de
Safety Data Sheet	sdb@chemiebuero.de

### 1.4 Emergency telephone number

Company	+49 (0)9431 53222 (24h) +49 (0)9431 530 (24h)
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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

No classification.

### 2.2 Label elements

Hazard pictograms	
Hazard statements	none

### 2.3 Other hazards

Human health dangers	Prolonged and excessive contact can cause irritation of the respiratory tract.
Environmental hazards	Does not contain any PBT or vPvB substances.
Other hazards	none

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### SECTION 3: Composition / Information on ingredients

#### Product-type:

3.1 The product is a substance.

Range [%]	Substance
> 99,5	Aluminium hydroxide
	CAS: 21645-51-2

#### Comment on component parts

No dangerous components.  
Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.  
All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

<b>General information</b>	Change powdered clothing.
<b>Inhalation</b>	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
<b>Skin contact</b>	When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In the event of symptoms seek medical treatment.
<b>Ingestion</b>	Rinse out mouth and give plenty of water to drink. In the event of symptoms seek medical treatment.

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

none

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

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.
<b>Extinguishing media that must not be used</b>	Full water jet

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

none

#### 5.3 Advice for firefighters

Use self-contained breathing apparatus.  
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Use breathing apparatus if exposed to dust.  
Avoid dust formation.

#### 6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

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### 6.3 Methods and material for containment and cleaning up

Take up mechanically.  
Avoid raising dust.  
Dispose of absorbed material in accordance within the regulations.

### 6.4 Reference to other sections

See SECTION 8+13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid the formation and deposition of dust.  
Provide vacuuming if dust raised.

Wash hands before breaks and after work.  
Use barrier skin cream.  
Do not eat, drink, smoke or take drugs at work.

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

Keep only in original container.  
Prevent penetration into the ground.  
Do not store together with food and animal food/diet.  
Store in a dry place.

### 7.3 Specific end use(s)

See product use, SECTION 1.2

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with occupational exposure limits to be monitored (US)

Substance
Aluminium hydroxide
CAS: 21645-51-2
Long-term exposure: 10 mg/m <sup>3</sup> , ACGIH (Al <sub>2</sub> O <sub>3</sub> )

#### DNEL

Substance
Aluminium hydroxide, CAS: 21645-51-2
Industrial, inhalative, Long-term - systemic effects: 10,76 mg/m <sup>3</sup> .
Industrial, inhalative, Long-term - local effects: 10,76 mg/m <sup>3</sup> .
general population, oral, Long-term - systemic effects: 4,74 mg/kg bw/day.

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## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation. To pay attention to dust limit value (ACGIH-2011: 10 mg/m <sup>3</sup> particle inhalable; 3 mg/m <sup>3</sup> particle respirable). Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
<b>Eye protection</b>	Safety glasses. (EN 166:2001)
<b>Hand protection</b>	0,11mm Nitrile rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
<b>Skin protection</b>	Protective clothing (EN 340)  Avoid contact with eyes and skin. Do not inhale dust. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
<b>Respiratory protection</b>	Breathing apparatus in the event of high concentrations. Short term: filter apparatus, filter P1. (DIN EN 143)
<b>Thermal hazards</b>	not applicable
<b>Delimitation and monitoring of the environmental exposition</b>	Protect the environment by applying appropriate control measures to prevent or limit emissions.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	powder
<b>Color</b>	white
<b>Odor</b>	odorless
<b>Odor threshold</b>	not applicable
<b>pH-value</b>	8 - 9 (20°C) Saturated solution
<b>pH-value [1%]</b>	not determined
<b>Boiling point [°C]</b>	2980
<b>Flash point [°C]</b>	not applicable
<b>Flammability [°C]</b>	not applicable
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Oxidizing properties</b>	no
<b>Vapor pressure/gas pressure [kPa]</b>	not applicable
<b>Density [g/ml]</b>	2,4 (20 °C / 68,0 °F)
<b>Bulk density [kg/m<sup>3</sup>]</b>	not determined
<b>Solubility in water</b>	0,00009 g/l (20°C)
<b>Partition coefficient [n-octanol/water]</b>	not applicable
<b>Viscosity</b>	not applicable
<b>Relative vapor density determined in air</b>	not applicable
<b>Evaporation speed</b>	not applicable
<b>Melting point [°C]</b>	not applicable
<b>Autoignition temperature [°C]</b>	not applicable
<b>Decomposition temperature [°C]</b>	> 200

### 9.2 Other information

none

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.

### 10.2 Chemical stability

The product is stable under standard conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known.

### 10.4 Conditions to avoid

Strong heating, because the thermal decomposition starts from 200°C.

### 10.5 Incompatible materials

Reactions with strong acids and alkalies.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Substance
Aluminium hydroxide, CAS: 21645-51-2
LD50, oral, Rat: > 2000 mg/kg.
LC50, inhalative, Rat: 7,6 mg/l 4h.
NOAEL, oral, Rat: 30 mg/kg bw/day chronic (analogon).
NOAEC, inhalative, Rat: 70 mg/m <sup>3</sup> subchronic (analogon).

<b>Serious eye damage/irritation</b>	Non-corrosive / non-irritating.
<b>Skin corrosion/irritation</b>	Non-corrosive / non-irritating.
<b>Respiratory or skin sensitisation</b>	Non-sensitizing.
<b>Specific target organ toxicity — single exposure</b>	No classification.
<b>Specific target organ toxicity — repeated exposure</b>	No classification.
<b>Mutagenicity</b>	There is no evidence of any mutagenic effects.
<b>Reproduction toxicity</b>	There is no evidence of any reproductive toxicity effects.
<b>Carcinogenicity</b>	There is no evidence of any carcinogenic effects.
<b>Aspiration hazard</b>	No classification.
<b>General remarks</b>	none

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
Aluminium hydroxide, CAS: 21645-51-2
LC50, Salmo trutta: > 100 mg/l.
EC50, Selenastrum capricornutum: > 100 mg/l.
EC50, Daphnia magna: > 100 mg/l.

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## 12.2 Persistence and degradability

Behaviour in environment compartments not applicable

Behaviour in sewage plant not applicable

Biological degradability not applicable

## 12.3 Bioaccumulative potential

not applicable

## 12.4 Mobility in soil

not applicable

## 12.5 Results of PBT and vPvB assessment

not applicable

## 12.6 Other adverse effects

None known.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

For recycling, consult manufacturer.

#### Contaminated packaging

Uncontaminated packaging may be reused.

#### RCRA Hazard Class (40 CFR 261)

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities.

## SECTION 14: Transport

### 14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

DOT Road Shipment Information (49 CFR) not applicable

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#### 14.2 UN proper shipping name

Transport by land according to ADR/RID	NO DANGEROUS GOODS
Inland navigation (ADN)	NO DANGEROUS GOODS
Marine transport in accordance with IMDG	NOT CLASSIFIED AS "DANGEROUS GOODS"
Air transport in accordance with IATA	NOT CLASSIFIED AS "DANGEROUS GOODS"
DOT Road Shipment Information (49 CFR)	NOT CLASSIFIED AS "DANGEROUS GOODS"

#### 14.3 Transport hazard class(es)

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable
DOT Road Shipment Information (49 CFR)	not applicable

#### 14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable
DOT Road Shipment Information (49 CFR)	not applicable

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#### 14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

DOT Road Shipment Information (49 CFR) no

#### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

#### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

##### US Regulations

**National regulations** 29 CFR 1910.1200-HCS 2012, OSHA-PEL, ACGIH-TLV, NTP, IARC, SARA Title III, NFPA, TSCA, California - Prop. 65

- SARA, 302 This product does not contain any ingredients regulated under this list.

- SARA, 311 This product does not contain any ingredients regulated under this list.

- SARA, 313 This product does not contain any ingredients regulated under this list.

- CA Proposition 65

- TSCA All chemical substances in this material are included on or exempted from listing on the TSCA Inventory.

- FDA

**American Conference of Governmental Industrial Hygienists - ACGIH** Ingredients not listed as carcinogens.

**International Agency for Research on Cancer IARC** Ingredients not listed as carcinogens.

**National Toxicology Program - NTP** This product is not named NTP - National Toxicology Program.

**HAP-VOC** not applicable

**Transport-regulations** DOT-Classification, ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2020)

#### 15.2 Chemical safety assessment

For this substance a chemical safety assessment has been carried out.



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## SECTION 16: Other information

### 16.1 Abbreviations and acronyms:

ACGIH = American Conference of Governmental Industrial Hygienists;  
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route;  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses;  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure;  
CAS = Chemical Abstracts Service;  
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;  
CFR = Code of Federal Regulations;  
CPR = Controlled Products Regulations;  
DMEL = Derived Minimum Effect Level;  
DNEL = Derived No Effect Level;  
DOT = Department of Transportation;  
EC50 = Median effective concentration;  
EPA = Environmental Protection Agency;  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals;  
IATA = International Air Transport Association;  
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;  
IC50 = Inhibition concentration, 50%;  
IMDG = International Maritime Code for Dangerous Goods;  
IARC = International Agency of Research on Cancer;  
IATA = International Air Transport Association;  
TSCA = Toxic Substance Control Act;  
HMIS = Hazardous Materials Identification System;  
NFPA = National Fire Protection Association;  
NIOSH = National Institute for Occupational Safety and Health;  
OSHA = Occupational Safety and Health Administration;  
LC50 = Lethal concentration, 50%;  
LD50 = Median lethal dose, 50%;  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships;  
PBT = Persistent, Bioaccumulative and Toxic substance;  
PNEC = Predicted No-Effect Concentration;  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals;  
SARA = Superfund Amendments and Reauthorization Act;  
TLV®/TWA = Threshold limit value – time-weighted average;  
TLV®/STEL = Threshold limit value – short-time exposure limit;  
VOC = Volatile Organic Compounds;  
vPvB = very Persistent and very Bioaccumulative;

### 16.2 Ratings

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#### NFPA Ratings



TOP, FLAMMABILITY: 0 - Minimal Hazard  
LEFT, HEALTH: 1 - Slight Hazard  
RIGHT, REACTIVITY: 0 - Minimal Hazard  
BOTTOM, SPECIAL NOTICE: -

#### HMIS Ratings

HEALTH	1	1 - Slight Hazard
FLAMMABILITY	0	0 - Minimal Hazard
PHYSICAL HAZARD	0	0 - Minimal Hazard
PERSONAL PROTECTION	A	A - Safety Glasses

#### PERSONAL PROTECTION:

- A - Safety Glasses
- B - Safety Glasses and Gloves
- C - Safety Glasses, Gloves and Protection Apron
- D - Face Shield, Gloves and Protection Apron
- E - Safety Glasses, Gloves and Dust Respirator
- F - Safety Glasses, Gloves, Protection Apron and Dust Respirator
- G - Safety Glasses, Gloves and Vapor Respirator.
- H - Splash Goggles, Gloves, Protection Apron and Vapor Respirator.
- I - Safety Glasses, Gloves, Dust Respirator and Vapor Respirator.
- J - Splash Goggles, Gloves, Protection Apron, Dust Respirator and Vapor Respirator.
- K - Airline Mask or Hood, Gloves, Full Suit and Boots.
- X - Personal protection rating to be supplied by user depending on use conditions

#### Modified position

none



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