

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

General information	Change powdered clothing.
Inhalation	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
Skin contact	When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
Eye contact	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.
Ingestion	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

Suitable extinguishing media	Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.
Extinguishing media that must not be used	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 ³ , ACGIH (Al ₂ O ₃)

DNEL

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

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8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. To pay attention to dust limit value (ACGIH-2011: 10 mg/m ³ particle inhalable; 3 mg/m ³ 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.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,11mm Nitrile rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	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.
Respiratory protection	Breathing apparatus in the event of high concentrations. Short term: filter apparatus, filter P1. (DIN EN 143)
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	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

Form	powder
Color	white
Odor	odorless
Odor threshold	not applicable
pH-value	8 - 9 (20°C) Saturated solution
pH-value [1%]	not determined
Boiling point [°C]	2980
Flash point [°C]	not applicable
Flammability [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidizing properties	no
Vapor pressure/gas pressure [kPa]	not applicable
Density [g/ml]	2,4 (20 °C / 68,0 °F)
Bulk density [kg/m³]	not determined
Solubility in water	0,00009 g/l (20°C)
Partition coefficient [n-octanol/water]	not applicable
Viscosity	not applicable
Relative vapor density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	not applicable
Autoignition temperature [°C]	not applicable
Decomposition temperature [°C]	> 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 ³ subchronic (analogon).

Serious eye damage/irritation	Non-corrosive / non-irritating.
Skin corrosion/irritation	Non-corrosive / non-irritating.
Respiratory or skin sensitisation	Non-sensitizing.
Specific target organ toxicity — single exposure	No classification.
Specific target organ toxicity — repeated exposure	No classification.
Mutagenicity	There is no evidence of any mutagenic effects.
Reproduction toxicity	There is no evidence of any reproductive toxicity effects.
Carcinogenicity	There is no evidence of any carcinogenic effects.
Aspiration hazard	No classification.
General remarks	

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
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	A

1 - Slight Hazard
0 - Minimal Hazard
0 - Minimal Hazard
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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