



HN-100, HN-36, HN-336, HN-434, HN-532

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
COMMISSION REGULATION (EU) No. 2020/878

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

1.1. Product identifier

Product Name:	HN-100, HN-36, HN-336, HN-434, HN-532
Chemical Name	Aluminum Hydroxide
Pure substance/mixture	Substance

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

Recommended Use	Flame retardant.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Manufacturer	MARTINSWERK GmbH Kölner Strasse 110 50127 Bergheim Germany Tel. : +49-2271-90.22.78 Fax. : +49-2271-90.27.17
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Internet	www.huberadvancedmaterials.com
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Contact E-Mail	www.huberadvancedmaterials.com/contact
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1.4. Emergency telephone number	CHEMTREC: +1 800 424 9300 or International 1+703-527-3887
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Poison control center phone number	National Anti-Poison Center UK: +44 844 892 0111 (National Poisons Information Service)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

(CLP) Regulation (EC 1272/2008) Not classified.

Hazards identification

Physical Hazard	Not classified.
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Health Hazards	Not classified.
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Environmental Hazard Not classified.

2.2. Label elements

Symbols/Pictograms None**Signal Word** None**Hazard Statements** None

Precautionary Statements

Prevention Employ good industrial hygiene practice
Wash hands thoroughly after handling**Response** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN: Wash with plenty of soap and water**Storage** Keep in a dry place
Store away from incompatible materials**Disposal** Disposal should be in accordance with applicable regional, national and local laws and regulations.**Additional Information:** None.**2.3. Other hazards** The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration
This product does not contain any known or suspected endocrine disruptors

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance

Chemical Name	CAS NUMBER:	EC No	(CLP) Regulation (EC 1272/2008)	Weight-%
Aluminum Hydroxide	21645-51-2	244-492-7	Not classified	100

SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice When in doubt or if symptoms are observed, get medical advice. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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Eye Contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact	Wash with plenty of soap and water.
Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	Rinse mouth thoroughly with water.
Aspiration hazard	Not an expected route of exposure.
Notes to Physician	Treat symptomatically.
4.2. Most important symptoms and effects, both acute and delayed	Signs and symptoms may include coughing, gasping, choking and difficulty breathing.
4.3. Indication of any immediate medical attention and special treatment needed	Treatment should be symptomatic and supportive.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO₂).

Unsuitable Extinguishing Media

None known.

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advice for firefighters

Special protective equipment for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Fire-fighting measures

In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid dust formation. Keep unauthorized personnel away.

For non-emergency personnel Keep unauthorized personnel away.

For emergency responders Keep unauthorized personnel away. Use personal protection recommended in Section 8.

6.2. Environmental precautions Avoid runoff to waterways and sewers.

6.3. Methods and material for containment and cleaning up Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust Small Spill: Vacuum or sweep material and place in a disposal container

6.4. Reference to other sections Section 8: Exposure controls and personal protection. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Minimize dust generation and accumulation
Provide local exhaust ventilation
Handle in accordance with good industrial hygiene and safety practice

7.2. Conditions for safe storage, including any incompatibilities Store away from incompatible materials
Keep container tightly closed and dry

7.3. Specific end use(s) Flame retardant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Aluminum Hydroxide

ACGIH
OSHA

TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)

TWA: 15 mg/m³ (Total Dust)

5 mg/m³ (Respirable Dust)

NIOSH

TWA: 5 mg/m³ (respirable dust); 10 mg/m³ TWA (total dust)

France

Not established (Non établi)

France

Not established (Non établi)

Germany

1.25 mg/m³

10 mg/m³

Poland

2.5 mg/m³ (inhalable); 1.2 mg/m³ (respirable)

Switzerland

TWA: 3 mg/m³

United Kingdom

10 mg.m-3 (inhalable); 4 mg.m-3 (respirable)

Recommended monitoring

Refer also to national guidance documents for information on currently

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procedures	recommended monitoring procedures
Biological Limit Values	None
DNEL (Derived No Effect Level)	Consumer - oral, long-term - local and systemic 4.74 mg/kg bw/day Worker - inhalative, long-term - local and systemic 10.74 mg/m ³
PNEC (Predicted No Effect Concentration)	No information available

8.2. Exposure controls

Engineering Measures	Ensure adequate ventilation, especially in confined areas Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Personal protective equipment	
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and Body Protection	Wear suitable protective clothing.
Hand Protection	Protective gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposures exceeds established guidelines. In case of exposure to high levels of airborne mist, wear a respirator in compliance with national legislation. EN 149, P2 Half-mask.
Thermal hazards	None known.
Hygiene Measures	Follow general hygiene considerations recognized as common good workplace practices The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc
Environmental Exposure Controls	Dispose of in accordance with local regulations

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Physical State	Solid Powder
Odor	Odorless
pH:	8.4 - 10.2 5% Water suspension
Melting point / Freezing point	ca 300 °C / 572 °F (101.3 kPa)
Initial boiling point	5396 °F (2980 °C) 101.3 kPa

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Freezing Point	Not applicable
Flash Point	Not applicable
Flammability	Not applicable
Flammability	Not applicable
Upper flammability limit:	--
Lower flammability limit:	--
Vapor Pressure	Not applicable
Relative Vapor Density	Not applicable
Relative Vapor Density	Not applicable
Density	No data available
Relative Density	2.4 g/cm ³ , 20° C
Water Solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition Temperature	Not applicable
Decomposition Temperature	392 °F (200 °C)
Viscosity	Not applicable.
Kinematic viscosity	Not applicable
Explosive Properties	None
Oxidizing Properties	Not applicable
Particle Characteristics	No information available
VOC Content (%)	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not applicable

9.2.2. Other safety characteristics

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity	None
10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	None under normal processing
10.4. Conditions to avoid	Incompatible materials
10.5. Incompatible materials	Strong acids
10.6. Hazardous decomposition products	None known

SECTION 11: Toxicological information

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General Information

Users are advised to consider national Occupational Exposure Limits or other equivalent values.

11.1. Information on toxicological effects**Aluminum Hydroxide**

LD50s and LC50s

> 5000 mg/kg Oral LD50

Oral LD50

> 2000 mg/kg Rat

IARC

Not Listed

Acute Toxicity

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

Chronic Toxicity

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

Chronic Effects

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

Respiratory Sensitization

No information available

Serious eye damage/eye irritation

Non-irritant Rabbit

Skin Corrosion/Irritation

Non-irritant Rabbit

Skin Sensitization

Based on available data, the classification criteria are not met. Not a skin sensitizer Guinea pig

Mutagenicity

in vitro Not genotoxic in bacteria and mammalian cell systems.
in vivo Mutagenicity (micronucleus test) Rat Negative (weight of evidence approach)

Germ cell mutagenicity

No information available.

Reproductive Effects

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

Reproductive Toxicity

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

Carcinogenicity

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

Specific target organ toxicity - Single exposure

Not classified.

Specific target organ toxicity - Repeated exposure

No information available.

Mixture versus substance information

No information available

Information on Likely Routes of Exposure**Inhalation**

Do not breathe dust
Inhalation of dust may cause irritation of the respiratory system

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Ingestion	Ingestion is not a likely route of exposure
Skin	Contact with dust can cause mechanical irritation or drying of the skin
Eyes	Dust contact with the eyes can lead to mechanical irritation
Aspiration hazard	Not an expected route of exposure.

11.2. Information on other hazards

- 11.2.1. Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors
- 11.2.2. Other information** Not applicable

SECTION 12: Ecological information

12.1. Toxicity Not considered to be harmful to aquatic life

Aluminum Hydroxide

Aquatic toxicity Not considered to be harmful to aquatic life
WGK Classification (AwSV) 5220. WGK: nwg

12.2. Persistence and degradability The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential Not likely to bioaccumulate.

Partition coefficient No information available

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties This product does not contain any known or suspected endocrine disruptors

12.7. Other Adverse Effects None known

SECTION 13: Disposal considerations

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13.1. Waste treatment methods

Disposal Methods	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
Waste codes	Waste codes should be assigned by the user based on the application for which the product was used

Aluminum Hydroxide

European Waste Catalog	060299
WGK Classification (AwSV)	5220. WGK: nwg

SECTION 14: Transport information

Mode of Transportation (Road, Water, Air, Rail)

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number or ID number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

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SECTION 15: Regulatory information

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

Global Inventories

Pure substance/mixture

Substance

Chemical Name	CAS NUMBER:	EC No	Australia (AIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	Thailand (TECI)	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Aluminum Hydroxide	21645-51-2	244-492-7	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	55-1-02595	Y	Y	Y	A

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

REACH No.

Aluminum Hydroxide

EU REACH registration number 01-2119529246-39

Turkish KKDIK pre-registration 05-0000193352-73-0000

Germany

Not considered to be harmful to aquatic life

Aluminum Hydroxide

WGK Classification (AwSV) 5220. WGK: nwg

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Reason for Revision

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 & COMMISSION REGULATION (EU) No. 2020/878

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(CLP) Regulation (EC 1272/2008) Not classified.

Labeling

Symbols/Pictograms

None

Signal Word

None

Hazard Statements

None

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Do not handle until all safety precautions have been read and understood.

Abbreviations and acronyms

IARC (International Agency for Research on Cancer)
IUCLID (International Uniform Chemical Information Database)
WHMIS (Workplace Hazardous Materials Information System)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
TWA (Time-Weighted Average)
CLP (The Classification, Labeling and Packaging of Substances and Mixtures Regulation (EC 1272/2008))
PPE (Personal Protection Equipment)
NIOSH (National Institute for Occupational Safety and Health)
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
RQ (Reportable Quantity) (RQ/% in mixture)
STEL (Short Term Exposure Limit)
TLV® (Threshold Limit Value)
DNEL (Derived No Effect Level)
SVHC (Substances of Very High Concern)
BOD (Biochemical oxygen demand)
COD (Chemical oxygen demand)
ICAO (International Civil Aviation Organization)
IMDG (International Maritime Dangerous Goods)
ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)
IATA (International Air Transport Association)
IMDG (International Maritime Dangerous Goods)
DOT (Department of Transportation)
TDG (Transport of Dangerous Goods) Canada
PNEC (Predicted No Effect Concentration)
SCBA (Self-Contained Breathing Apparatus) Positive Pressure
GHS (Globally Harmonized System)
TSCA (Toxic Substances Control Act)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet