



Safety Data Sheet

ADVANCED MATERIALS

Martifin® OL-004

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: Martifin® OL-004
Chemical Name Aluminum Hydroxide (suspension)
Pure substance/mixture Mixture

Chemical Name	CAS Number	EC No	EU REACH registration number	(CLP) Regulation (EC 1272/2008)	Weight-%
Aluminum hydroxide-Dispersion	Multiple	--	Complies	Not classified	100
Aluminum Hydroxide	21645-51-2	244-492-7	01-2119529246-39	Not classified	66 - 69

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

Recommended Use Additive : White pigment for paper and board, filler, etc.
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

Internet www.hubermaterials.com

E-mail hubermaterials@huber.com

1.4. Emergency telephone number CHEMTREC: +1 800 424 9300 or International +1 703 527 3887

Poison control center phone number National Anti-Poison Center UK: +44 844 892 0111 (National Poisons Information Service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazards identification

Physical Hazard Not classified

Health Hazards Not classified

Environmental Hazard Not classified

2.2. Label elements

Symbols/Pictograms None

Signal Word None

Hazard Statements The substance does not meet the criteria for classification.

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 No information available.

SECTION 3: Composition/information on ingredients

3.1. Substance Not applicable

3.2. Mixture Mixture

Chemical Name	CAS Number	EC No	EU REACH registration number	(CLP) Regulation (EC 1272/2008)	Annex	Weight-%
Aluminum hydroxide-Dispersion	Multiple	--	Complies	Not classified	-	100
Aluminum Hydroxide	21645-51-2	244-492-7	01-2119529246-39	Not classified	--	66 - 69

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.
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	No information available.
Notes to Physician	Treat symptomatically.
4.2. Most important symptoms and effects, both acute and delayed	Treat symptomatically.
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

- 6.1. Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation. Use personal protection recommended in Section 8. 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** Methods for Containment : Prevent further leakage or spillage if safe to do so
 Methods for Clean-up : Sweep up and shovel into suitable containers for disposal
- 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** Provide local exhaust ventilation
 Handle in accordance with good industrial hygiene and safety practice
- 7.2. Conditions for safe storage, including any incompatibilities** Keep container tightly closed and dry
- 7.3. Specific end use(s)** No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Aluminum hydroxide-Dispersion

ACGIH	TWA/TLV: 1 mg/m ³ respirable fraction
OSHA	Not established
NIOSH	Not established
Austria	TWA: 5 mg/m ³ respirable fraction 10 mg/m ³ inhalable fraction
Austria	STEL: 10 mg/m ³ respirable fraction 20 mg/m ³ inhalable fraction
Belgium	TWA: 1 mg/m ³ Respirable fraction
Bulgaria	TWA: 2.0MGM3;AI 1.5 mg/m ³ ;Respirable fraction 10.0 mg/m ³ ;Dust
Croatia	TWA: 6 mg/m ³ Respirable dust

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Czech Republic	TWA: 10 mg/m ³ dust
Estonia	TWA: 2 mg/m ³
Finland	2 mg/m ³ Al
Germany	TWA: 3 mg/m ³ respirable dust 10 mg/m ³ inhalable dust BAT: 200 µg/l
Ireland	TWA: 10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Ireland	STEL: 30 mg/m ³ total inhalable dust 12 mg/m ³ respirable dust
Italy	TWA: 1 mg/m ³ respirable fraction
Latvia	6 mg/m ³
Lithuania	6 mg/m ³
Netherlands	TWA: 0.05 mg/m ³
Poland	TWA: 1.2 mg/m ³ respirable dust and/or fume (Al) 2.5 mg/m ³ fume, total dust (Al)
Romania	TWA: 3 mg/m ³ dust 1 mg/m ³ fume
Slovakia	TWA: 1.5 mg/m ³ respirable fraction 4 mg/m ³ inhalable fraction
Slovenia	TWA: 6 mg/m ³ respirable fraction
Sweden	TWA: 1 mg/m ³ Total dust (Al)
Switzerland	TWA: 3 mg/m ³ respirable dust
United Kingdom	TWA: 10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust

Aluminum Hydroxide

ACGIH	TLV/TWA 8-hr: 1 mg/m ³ (respirable fraction)
OSHA	TWA: 15 mg/m ³ Total Dust 5 mg/m ³ Respirable Dust
NIOSH	TWA: 5 mg/m ³ (respirable dust); 10 mg/m ³ TWA (total dust)
France	Not established (Non établi)
France	Not established (Non établi)
Poland	2.5 mg/m ³ (inhalable); 1.2 mg/m ³ (respirable)
Switzerland	TWA: 3 mg/m ³
United Kingdom	10 mg.m-3 (inhalable); 4 mg.m-3 (respirable)

Recommended monitoring procedures Refer also to national guidance documents for information on currently recommended monitoring procedures

Biological Limit Values None

DNEL (Derived No Effect Level)**Aluminum hydroxide-Dispersion**

Worker - inhalative, long-term - local	3 mg/m ³
Consumer - oral, long-term - systemic	6.85 mg/kg bw/day

PNEC (Predicted No Effect Concentration)**Aluminum hydroxide-Dispersion**

Sewage treatment plant	20 mg/L
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8.2. Exposure controls

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Engineering Measures	Do not handle until all safety precautions have been read and understood Ensure adequate ventilation, especially in confined areas Provide a good standard of controlled ventilation (10 to 15 air changes per hour) Use exhaust ventilation to keep airborne concentrations below exposure limits In case of insufficient ventilation, wear suitable respiratory equipment
Personal protective equipment	
Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and Body Protection	Wear suitable protective clothing.
Hand protection	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn. Wear suitable gloves tested to EN 374.
Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Recommended filter type: (FFP2) (FFP3)
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	Liquid (suspension)
Color	White
Odor	Odorless
Odor Threshold	No information available
pH:	9-10
Melting point / Freezing point	<= 0 °C / 32 °F (Water)
Initial boiling point and boiling range	>= 100 °C / 212 °F (Water)
Freezing Point	Not applicable
Flash Point	No data available
Evaporation Rate	No data available.
Flammability (solid, gas)	Not flammable
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapor Pressure	ca 25 mbar (Water)

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Vapor Density	No data available
Density	No data available
Relative Density	+/- 1.6 g/cm ³ (20 °C)
Water Solubility	Insoluble (Solid)
Solubility in other solvents	No information available
Partition coefficient	No information available No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No information available.
Kinematic viscosity	No data available
Dynamic viscosity	No data available ca 150 mPa.s (Epprecht Rheometer)
Explosive Properties	None
Oxidizing Properties	No data available
Particle Size	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	No data available
10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	None under normal processing
10.4. Conditions to avoid	Decomposition Temperature Al ₂ O ₃ Water +/- pH
10.5. Incompatible materials	No information available
10.6. Hazardous decomposition products	None known

SECTION 11: Toxicological information

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

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Aluminum hydroxide-Dispersion**

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Oral LD50	> 2000 mg/kg Rat
Inhalation LC50	Inhalation LC50 (4 hrs) Rat > 2.3 mg/l (Al ₂ O ₃) Aerosol Maximum attainable concentration
Serious eye damage/eye irritation	Non-irritant : Rabbit
Skin Corrosion/Irritation	Non-irritant : Rabbit
Skin Sensitization	Guinea pig : Not a skin sensitizer
Mutagenicity	in vitro Not genotoxic in bacteria and mammalian cell systems. in vivo Mutagenicity (micronucleus test) Rat : Negative
Reproductive Effects	No indication of effects on developmental toxicity. No indication of effects on fertility.
Specific target organ toxicity - Single exposure	No information available
Specific target organ toxicity - Repeated exposure	No information available

Aluminum Hydroxide

Oral LD50	> 2000 mg/kg Rat
Inhalation LC50	Rat > 2.3 mg/l (Al ₂ O ₃) Aerosol Maximum attainable concentration
IARC	Not Listed

Acute Toxicity	Low hazard for usual industrial or commercial handling
Carcinogenicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - Single exposure	No information available.
Specific target organ toxicity - Repeated exposure	No information available.

Information on Likely Routes of Exposure

Inhalation	Avoid breathing vapor or mist
Ingestion	Ingestion is not a likely route of exposure
Skin	Avoid prolonged or repeated contact with skin
Eyes	Avoid contact with eyes
Aspiration hazard	No information available.

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

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12.1. Toxicity Not considered to be harmful to aquatic life

Aluminum hydroxide-Dispersion

96-Hour LC50 > 10000 mg/l Fish

48-Hour EC50 > 10000 mg/l Daphnia Magna (Water Flea)

WGK Classification (AwSV) 5442. WGK: nwg

Aluminum Hydroxide

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.

Bioconcentration factor (BCF) No data 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

SECTION 13: Disposal considerations

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. Do not reuse container.

Waste codes Waste codes should be assigned by the user based on the application for which the product was used

Aluminum hydroxide-Dispersion

WGK Classification (AwSV) 5442. WGK: nwg

Aluminum Hydroxide

European Waste Catalog 060299

WGK Classification (AwSV) 5220 WGK: nwg

SECTION 14: Transport information

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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

SECTION 15: Regulatory information

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

Global Inventories

Pure substance/mixture

Mixture

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-Dispersion	Multiple	--	Y	Y	X	(1)-17	KE-00980	X		X	X	X	A
Aluminum Hydroxide	21645-51-2	244-492-7	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	55-1-02594	Y	Y	Y	A

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

REACH No.

Aluminum hydroxide-Dispersion

EU REACH registration number Complies

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Aluminum Hydroxide

EU REACH registration number 01-2119529246-39
Turkish KKDIK pre-registration 05-0000193352-73-0000

Germany

Very low solubility Not considered to be harmful to aquatic life

Aluminum hydroxide-Dispersion

WGK Classification (AwSV) 5442. WGK: nwg

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 The substance does not meet the criteria for classification.

Training Advice 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)

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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