



MAGNESIUM PERCHLORATE (ANHYDRONE) DESICCANT, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 05/06/2020 Revision date: 14/02/2024 Supersedes version of: 05/06/2020 Version: 2.0

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

1.1. Product identifier

Product form	: Substance
Substance name	: MAGNESIUM PERCHLORATE (ANHYDRONE) DESICCANT, OEA
Chemical name	: Magnesium perchlorate
EC-No.	: 233-108-3
CAS-No.	: 10034-81-8
REACH registration No.	: 01-2120817813-54
Product code	: R42000
Product group	: End product

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

1.2.1. Relevant identified uses

Main use category	: Professional use
Use of the substance/mixture	: Laboratory chemicals
Function or use category	: Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

OEA Labs Ltd
The Generator Quay House The Gallery
Kings Wharf The Quay
EX2 4AN Exeter – Devon
United Kingdom
T +44(0)1579 384174
technical@oealabs.com - oealabs.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)





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Signal word (CLP) : GHS07
 Hazard statements (CLP) : Warning
 : H302 - Harmful if swallowed.
 : H412 - Harmful to aquatic life with long lasting effects.
 Precautionary statements (CLP) : P264 - Wash hands, forearms and face thoroughly after handling.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
 Name : MAGNESIUM PERCHLORATE (ANHYDRONE) DESICCANT, OEA
 CAS-No. : 10034-81-8
 EC-No. : 233-108-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Magnesium perchlorate	CAS-No.: 10034-81-8 EC-No.: 233-108-3	100	Acute Tox. 4 (Oral), H302 (ATE=1490 mg/kg bodyweight) Aquatic Chronic 3, H412

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
 First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
 First-aid measures after skin contact : Wash skin with plenty of water.
 First-aid measures after eye contact : Rinse eyes with water as a precaution.
 First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.



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5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available



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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Off-white.
Molecular mass	: 223.21 g/mol
Odour	: Characteristic odour.
Odour threshold	: Not available
Melting point	: 250 °C Atm. press.: 101,3 kPa Decomposition: 'yes' Decomp. temp.: 250 °C Sublimation: 'no'
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 251 °C
pH	: 05-Aug
pH solution	: Not available
Viscosity, kinematic	: Not applicable



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Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 0 mm Hg Temp.: 25 °C
Vapour pressure at 50°C	: Not available
Density	: 2.4261 g/cm³ Type: 'density' Temp.: 20 °C
Relative density	: 2.21 – 2.6
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral	1490 mg/kg bodyweight Animal: other:, Guideline: other:
Magnesium perchlorate (10034-81-8)	
LD50 oral	1490 mg/kg bodyweight Animal: other:, Guideline: other:

Skin corrosion/irritation	: Not classified pH: 05-Aug
Serious eye damage/irritation	: Not classified pH: 05-Aug
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified



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Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Viscosity, kinematic	Not applicable
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.
Not rapidly degradable	

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EC50 - Crustacea [1]	100 mg/l Test organisms (species): Daphnia magna
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Magnesium perchlorate (10034-81-8)

EC50 - Crustacea [1]	100 mg/l Test organisms (species): Daphnia magna
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
HP Code	: HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment








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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1475	UN 1475	UN 1475	UN 1475	UN 1475
14.2. UN proper shipping name				
MAGNESIUM PERCHLORATE (Magnesium perchlorate)	MAGNESIUM PERCHLORATE (Magnesium perchlorate)	Magnesium perchlorate (Magnesium perchlorate)	MAGNESIUM PERCHLORATE (Magnesium perchlorate)	MAGNESIUM PERCHLORATE (Magnesium perchlorate)
Transport document description				
UN 1475 MAGNESIUM PERCHLORATE (Magnesium perchlorate), 5.1, II, (E)	UN 1475 MAGNESIUM PERCHLORATE (Magnesium perchlorate), 5.1, II	UN 1475 Magnesium perchlorate (Magnesium perchlorate), 5.1, II	UN 1475 MAGNESIUM PERCHLORATE (Magnesium perchlorate), 5.1, II	UN 1475 MAGNESIUM PERCHLORATE (Magnesium perchlorate), 5.1, II
14.3. Transport hazard class(es)				
5.1	5.1	5.1	5.1	5.1
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: O2
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC06
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAV
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Bulk (ADR)	: VC1, VC2, AP6, AP7
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24
Special provisions for carriage - Operation (ADR)	: S23



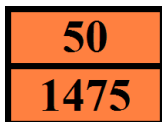
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Hazard identification number (Kemler No.) : 50

Orange plates :



Tunnel restriction code (ADR) : E

EAC code : 1Y

Transport by sea

Limited quantities (IMDG) : 1 kg

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P002

IBC packing instructions (IMDG) : IBC06

IBC special provisions (IMDG) : B21

Tank instructions (IMDG) : T3

Tank special provisions (IMDG) : TP33

EmS-No. (Fire) : F-H

EmS-No. (Spillage) : S-Q

Stowage category (IMDG) : A

Segregation (IMDG) : SGG13, SG38, SG49

Properties and observations (IMDG) : White crystals or powder. Reacts vigorously with sulphuric acid. Reacts fiercely with cyanides when heated or by friction. May form explosive mixtures with combustible material, powdered metals or ammonium compounds. These mixtures are sensitive to friction and are liable to ignite. When involved in a fire, may cause an explosion.

Air transport

PCA Excepted quantities (IATA) : E2

PCA Limited quantities (IATA) : Y544

PCA limited quantity max net quantity (IATA) : 2.5kg

PCA packing instructions (IATA) : 558

PCA max net quantity (IATA) : 5kg

CAO packing instructions (IATA) : 562

CAO max net quantity (IATA) : 25kg

ERG code (IATA) : 5L

Inland waterway transport

Classification code (ADN) : O2

Limited quantities (ADN) : 1 kg

Excepted quantities (ADN) : E2

Equipment required (ADN) : PP

Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : O2

Limited quantities (RID) : 1kg

Excepted quantities (RID) : E2

Packing instructions (RID) : P002, IBC06

Mixed packing provisions (RID) : MP2

Portable tank and bulk container instructions (RID) : T3

Portable tank and bulk container special provisions (RID) : TP33

Tank codes for RID tanks (RID) : SGAV

Special provisions for RID tanks (RID) : TU3

Transport category (RID) : 2

Special provisions for carriage – Packages (RID) : W11

Special provisions for carriage – Bulk (RID) : VC1, VC2, AP6, AP7

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Special provisions for carriage - Loading, unloading and handling (RID) : CW24

Colis express (express parcels) (RID) : CE10

Hazard identification number (RID) : 50

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions

: Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK)

: WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 364).

Storage class (LGK, TRGS 510)

: LGK 5.1B - Oxidising substances.

Joint storage table

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for

: LGK 1, LGK 2A, LGK 2B, LGK 4.1A, LGK 4.2, LGK 4.3, LGK 5.2, LGK 6.2, LGK 7.

Joint storage with restrictions permitted for

: LGK 3, LGK 4.1B, LGK 5.1C, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 10, LGK 11, LGK 10-13.

Joint storage permitted for

: LGK 5.1A, LGK 5.1B, LGK 8B, LGK 12, LGK 13.

Hazardous Incident Ordinance (12. BImSchV)

: Is not subject to the Hazardous Incident Ordinance (12. BImSchV)



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Netherlands

ABM category	: A(3) - hazardous for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed

Switzerland

Storage class (LK)	: LK 5 - Oxidizing materials
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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic



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Abbreviations and acronyms:

PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
H302	Harmful if swallowed.
H412	Harmful to aquatic life with long lasting effects.

The classification complies with : ATP 12

Safety Data Sheet (SDS)_OEA, EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.