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

1.1 Product identifier

Trade name

**Anhydrone (Magnesium perchlorate)**

Substance name  magnesium-perchlorate

Identification numbers

CAS no.  10034-81-8
EC no.  233-108-3

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

Relevant identified uses of the substance or mixture

chemical analysis

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

ELTRA GmbH
Retsch-Allee 1-5

42781 Haan
GERMANY

Telephone no.  +49 (0) 2104 23 33-400
Fax no.  +49 (0) 2104 23 33-499

Information provided by / telephone

+49 (0) 2104 23 33-192

Advice on Safety Data Sheet

info@eltra.com

1.4 Emergency telephone number

For medical advice (in German and English): +49 (0) 551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

EUH014
Eye Irrit. 2; H319
Ox. Sol. 2; H272
Skin Irrit. 2; H315
STOT SE 3; H335

Classification information

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3 and 4 of Annex I to CLP.

2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)**

Product identifier

10034-81-8 (magnesium-perchlorate)

Hazard pictograms
EC safety data sheet

Trade name: Anhydrone (Magnesium perchlorate)

Current version: 4.0.1, issued: 31.01.2020
Replaced version: 4.0.0, issued: 22.08.2018
Region: GB

Signal word
Danger

Hazard statement(s)
H272 May intensify fire; oxidiser.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Hazard statements (EU)
EUH014 Reacts violently with water.

Precautionary statement(s)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing.
P370+P338 In case of fire: Use extinguishing powder, foam or CO2 to extinguish.
P405 Store locked up.
P501 Dispose of contents/container to hazardous or special waste collection point.

2.3 Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization
Substance name magnesium-perchlorate
Formula ClHO4.1/2Mg

Identification numbers
CAS no. 10034-81-8
EC no. 233-108-3

3.2 Mixtures
Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Change contaminated clothing.

After inhalation
Remove affected person from the immediate area. Ensure supply of fresh air. In case of persisting adverse effects consult a physician.

After skin contact
When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.

After eye contact
Separate eyelids, wash the eyes thoroughly with water (15 min.). Get medical attention if pain still persists.
After ingestion
Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Dry chemical extinguisher; Carbon dioxide; Foam

Unsuitable extinguishing media
Water

5.2 Special hazards arising from the substance or mixture
In case of fires, hazardous combustion gases are formed: Carbon dioxide (CO2); Carbon monoxide (CO); Hydrogen chloride (HCl); Phosgene; Oxidizing due to release of oxygen.

5.3 Advice for firefighters
Use self-contained breathing apparatus. Wear protective clothing. Containers close to fire should be transferred to a safe place.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid dust formation.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up
Take up mechanically. When collected, handle material as described under the section heading "Disposal considerations". Do not flush with water or aqueous cleaning agents.

6.4 Reference to other sections
No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Provide good ventilation at the work area (local exhaust ventilation, if necessary). Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far it is possible by the state of the art. Avoid contact with skin and eyes. Avoid dust formation.

General protective and hygiene measures
Keep away from foodstuffs and beverages. Do not eat, drink or smoke during work time. Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Avoid contact with eyes and skin. Do not inhale dust. Do not inhale vapours. Provide eye wash fountain in work area. Have emergency shower available.

Advice on protection against fire and explosion
Product is oxidizing.

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions
Keep container tightly closed and dry in a cool, well-ventilated place. Protect from atmospheric moisture and water.

Requirements for storage rooms and vessels
Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

Incompatible products
Do not store together with: Acids; Ammonia; Reducing agents; Metals; organic materials; combustible materials

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No parameters available for monitoring.

8.2 Exposure controls
Appropriate engineering controls
No data available.

Personal protective equipment
Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust, aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Safety glasses with side protection shield (EN 166)

Hand protection
In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer’s instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other
Normal chemical work clothing.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form/Colour</td>
<td>granules; Powder</td>
</tr>
<tr>
<td></td>
<td>white</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH value</td>
<td>no data available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>Value 250 °C</td>
</tr>
<tr>
<td>Decomposition point / decomposition range</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Flash point
Not applicable

Ignition temperature
no data available

Auto-ignition temperature
no data available

Oxidising properties
No data available

Explosive properties
No data available

Flammability (solid, gas)
No data available

Lower flammability or explosive limits
No data available

Upper flammability or explosive limits
No data available

Vapour pressure
Not applicable

Vapour density
No data available

Evaporation rate
No data available

Relative density
No data available

Density
Value 2.21 g/cm³

Solubility in water
Comments easily soluble

Solubility(ies)
No data available

Partition coefficient: n-octanol/water
No data available

Viscosity
Not applicable

9.2 Other information
Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
No data available.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Protect against humidity.
10.5 Incompatible materials
Water; strong acids; Ammonia; Reducing agents; organic materials; Metals; combustible materials

10.6 Hazardous decomposition products
Carbon monoxide and carbon dioxide; Hydrogen chloride (HCl); Phosgene

SECTION 11: Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute oral toxicity</th>
<th>Comments</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute dermal toxicity</td>
<td>Comments</td>
<td>No data available.</td>
</tr>
<tr>
<td>Acute inhalational toxicity</td>
<td>Comments</td>
<td>No data available.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Comments</td>
<td>No data available.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Comments</td>
<td>No data available.</td>
</tr>
<tr>
<td>Respiratory tract irritation</td>
<td>Comments</td>
<td>No data available.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Comments</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Comments</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td>Comments</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Comments</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>Comments</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>Comments</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Comments</td>
<td>No data available</td>
</tr>
<tr>
<td>Delayed and immediate effects as well as chronic effects from short and long-term exposure</td>
<td>Comments</td>
<td>Irritates the eyes and the skin. Irritates the mucous membrane.</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Toxicity to fish (acute)</th>
<th>Comments</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish (chronic)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Toxicity to Daphnia (acute)</td>
<td>Comments</td>
<td>No data available.</td>
</tr>
<tr>
<td>Toxicity to Daphnia (chronic)</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>
12.2 Persistence and degradability

Biodegradability

| Comments | No data available. |

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

Other information

Do not discharge into the drains or waters and do not store on public depositories.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class
5.1
Classification code
Q2
Packing group
II
Hazard identification no.
50
UN number
UN1475
Proper shipping name
MAGNESIUM PERCHLORATE
Tunnel restriction code
E
Label
5.1

14.2 Transport IMDG

Class
5.1
Packing group
II
UN number
UN1475
Proper shipping name
MAGNESIUM PERCHLORATE
EmS
F-H, S-Q
Label
5.1

14.3 Transport ICAO-TI / IATA

Class
5.1
Packing group
II
EC safety data sheet

Trade name: Anhydrone (Magnesium perchlorate)

UN number: UN1475
Proper shipping name: Magnesium perchlorate
Label: 5.1

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
In accordance with the Reach regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

REACH candidate list of substances of very high concern (SVHC) for authorisation
In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

The substance is not subject to the provisions of annex XVII (restriction entries) of the Reach regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances
This product is subject to Part I of Annex I, risk category: P8

15.2 Chemical safety assessment
No data available.

SECTION 16: Other information

Further information
Article no. 90200, 454 g

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Department issuing safety data sheet
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This information is based on our present knowledge and experience.
The safety data sheet describes products with a view to safety requirements.
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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Trade name: Anhydron (Magnesium perchlorate)

Prod-ID 616960