Material safety data sheet

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Epsom Salt

1. Identification of the substance/mixture and company

Trade name:	Epsom Salt An inorganic salt presented under the form of heptahydrate sulfate mineral epsomite
INCI	Magnesium sulfate
CAS No. :	10034-99-8
EINESCS No. :	231-298-2
REACH pre-registration No. :	01-2119486789-11-XXXX
Utilization:	Raw material for cosmetic or professional use
Supplier company identification:	**Elemental SRL**, Piața Cazărmii no.15, 410188-Oradea, jud.Bihor, Romania Tel/Fax: +40259-436.755, www.elemental.eu
Emergency:	RO: număr național pentru cazuri de urgență: 021 3183606 Institutul de Sănătate Publică București. International emergency number: +49 180 2273-112

1.1 Relevant identified uses of the substance or mixture and uses advised against:
In accordance with Article 14.4. and section 3 of Annex VI to Regulation No. 1907/2006/EC exposure scenarios are not required. Therefore, there is no detailed information on the application.

1.2 Uses advised against:
No data available.

2. Hazards Identification

2.1 Classification of the substance or mixture
Chemical formula: $MgSO_4 \cdot 7H_2O$
Molar mass: 246.48 g/mol

2.2 Information if the substance is subject to authorization and details of any authorization granted or denied under Title VII in this supply chain:
Not applicable.

2.3 Details of any restriction imposed under Title VIII:
Not applicable.

2.4 Any other available and relevant information about the substance that is necessary to enable appropriate risk management measures to be identified and applied including specific conditions resulting from the application of section 3 of Annex XI:
None.

3. Declaration of ingredients

No data available.

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4. First aid measures

4.1 Most important symptoms and effects, both acute and delayed:
Eyes - No data available.
Skin - No data available.
Inhalation - No data available.
Ingestion – No data available.

5. Fire fighting measures

No data available.

6. Accidental release measures

No data available.

7. Handling and storage

7.1 Precautions for safe handling:
Avoid abnormal dust formation.
Avoid fuel (e.g. petroleum, lubricants etc.) and incompatible materials (straw, wood, etc.) contamination.
Avoid useless acting of air humidity to the substance.
Use suitable personal protective facilities (gloves) during handling.
Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:
Keep in dry, covered and ventilated storerooms. Keep the storerooms clean and tidy. Prevent the stored material from the access of fire. Avoid useless acting of air humidity to the substance. Keep deposited freely or packed in 25 kg of weight bags and 1000 kg of weight big-bags.
Incompatible substances: None known.

8. Exposure controls / personal protection

8.1 Control parameters:
Magnesium dinitrate, CAS number: 13446-18-9

8.2 Occupational Exposure limit values: undetermined

DNEL Workers

Exposure pattern	Route	Descriptor	DNEL / DMEL	(Corrected) Dose descriptor*)	Most sensitive endpoint	Justification
Acute-systemic	dermal	-	-	-	-	As an acute toxicity

effects						hazard leading to Classification and Labeling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterisation of dose [concentration]-response for human health, May 2008 and Part B: Hazard Assessment, Draft new chapter B.8 Scope of Exposure Assessment, March 2010).
Acute-systemic effects	Inhalation	-	-	-	-	As an acute toxicity hazard leading to Classification and Labeling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterisation of dose [concentration]-response for human health, May 2008 and Part B: Hazard Assessment, Draft new

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						chapter B.8 Scope of Exposure Assessment, March 2010).
Acute-local effects	Dermal	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
Acute-local effects	Inhalation	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
Long-term systemic effects	Dermal	DNEL (Derived No Effect Level)	21.3 mg/kg bw/day	NOAEL: 255.6 mg/kg bw/day (based on AF of 12)	repeated dose toxicity	-
Long-term systemic effects	Inhalation	DNEL (Derived No Effect Level)	37.6 mg/m³	NOAEC: 451.2 mg/m³ (based on AF of 12)	repeated dose toxicity	-
Long-term-local effects	Dermal	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
Long-term-local effects	Inhalation	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
*) The (corrected) dose descriptor starting points have been automatically calculated by multiplying the values of the fields "D(N)MEL" and "Assessment factor" provided in the Endpoint summary of IUCLID section 7. Toxicological information. It reflects the value after any corrections, e.g. route-to-route extrapolation. See column "Justification" for the rationale behind such modifications and the use of assessment factors.						

General population

Exposure pattern	Route	Descriptor	DNEL / DMEL	(Corrected) Dose descriptor *)	Most sensitive endpoint	Justification
Acute-systemic	Dermal	-	-	-	-	As an acute toxicity

effects						hazard leading to Classification and Labeling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterization of dose [concentration]-response for human health, May 2008 and Part B: Hazard Assessment, Draft new chapter B.8 Scope of Exposure Assessment, March 2010).
Acute-systemic effects	Inhalation	-	-	-	-	As an acute toxicity hazard leading to Classification and Labeling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterization of dose [concentration]-response for human health, May 2008 and Part B: Hazard Assessment, Draft new chapter B.8

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						Scope of Exposure Assessment, March 2010).
Acute-systemic effects	Oral	-	-	-	-	As an acute toxicity hazard leading to Classification and Labeling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterization of dose [concentration]-response for human health, May 2008 and Part B: Hazard Assessment, Draft new chapter B.8 Scope of Exposure Assessment, March 2010).
Acute – local effects	Dermal	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
Acute – local effects	Inhalation	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
Long-term - systemic effects	Dermal	DNEL (Derived No Effect Level)	12.8 mg/kg bw/day	NOAEL: 256.0 mg/kg bw/day (based on AF of 20)	repeated dose toxicity	-
Long-term systemic effects	Inhalation	DNEL (Derived	11.1 mg/m^3	NOAEC: 222.0 mg/m^3 (based on	repeated dose toxicity	-

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		No Effect Level)		AF of 20)		
Long-term - systemic effects	Oral	DNEL (Derived No Effect Level)	12.8 mg/kg bw/day	NOAEL: 256.0 mg/kg bw/day (based on AF of 20)	repeated dose toxicity	-
Long-term-local effects	Dermal	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
Long-term – local effects	Inhalation	-	-	-	-	Since no local effects were noted after dermal and inhalatory exposure, local DNELs were not derived.
*) The (corrected) dose descriptor starting points have been automatically calculated by multiplying the values of the fields "D(N)MEL" and "Assessment factor" provided in the Endpoint summary of IUCLID section 7. Toxicological information. It reflects the value after any corrections, e.g. route-to-route extrapolation. See column "Justification" for the rationale behind such modifications and the use of assessment factors.						

PNEC water

PNEC	Value	Assessment factor	Remarks/Justification
PNEC aqua (freshwater) mg/L	0.68	1000	Extrapolation method: assessment factor
PNEC aqua (marine water) mg/L	0.068	10000	Extrapolation method: assessment factor
PNEC aqua (intermittent releases) mg/L	6.8	100	Extrapolation method: assessment factor

PNEC sediment

PNEC	Assessment factor	Remarks/Justification
No or insufficient data available at present	-	In the absence of any ecotoxicological data for sediment dwelling organisms and for soil organisms, the PNEC sediment (freshwater), PNEC sediment (marine water) and PNEC soil might have been calculated using the equilibrium partitioning method (EPM) in EUSES, by using the PNEC aqua and the log Kow. The log Kow is not determined due to magnesium sulphate being an inorganic substance. For inorganic substances the equilibrium method cannot be used, therefore no PNEC has been calculated. In addition, the aquatic compartment is the target compartment of magnesium sulphate considering its physico-chemical properties and inorganic nature.

PNEC soil

PNEC	Assessment factor	Remarks/Justification
No or insufficient data available at present	-	In the absence of any ecotoxicological data for sediment dwelling organisms and for soil organisms, the PNEC sediment (freshwater), PNEC sediment (marine water) and PNEC soil might have been calculated using the equilibrium partitioning method (EPM) in EUSES, by using the PNEC aqua and the log Kow. The log Kow is not determined due to magnesium sulphate being an inorganic substance. For inorganic substances the equilibrium method cannot be used, therefore no PNEC has been calculated. In addition, the aquatic compartment is the target compartment of magnesium sulphate considering its physico-chemical properties and inorganic nature.

PNEC sewage treatment plant

PNEC	Value	Assessment factor	Remarks/Justification
PNEC (STP) mg/L	10	10	Extrapolation method: assessment factor

8.3 Advice on any training appropriate for workers to ensure protection of human health and the environment:
It is recommended to train workers to ensure the protection of human health and the environment.
It is necessary for the people working with the product to read and understand this SDS.
We recommend storing the SDS in a place with easy access to it for everyone who works with the product, and (if needed) for emergency services.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties
Appearance: Solid – white.
Odor: Odorless.
Odor threshold: No data available.
pH: No data available.
Melting point/freezing point: 25°C (1013 hPa).
Boiling point: No data available.
Flash point: No data available.
Evaporation rate: No data available.
Flammability (solid, gas): Non-flammable.
Upper/lower flammability or explosive limits: Upper: Not explosive. Lower: Not explosive.
Vapor pressure: No data available.
Vapor density: No data available.
Relative density: 2,66 g/cm^3.
Solubility(ies): Water: 360 g/l (20°C).
Partition coefficient: n-octanol/water: No data available.

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Auto-ignition temperature: Not applicable.
Decomposition temperature: No data available.
Viscosity: Not applicable.
Explosive properties: No explosive properties.
Oxidizing properties: No oxidizing properties.

10. Stability and reactivity

No data available.

11. Toxicological information

No data available.

12. Ecological information

No data available.

13. Disposal considerations

No data available.

14. Transport information

No data available.

15. Regulatory information

No data available.

16. Additional information

16.1 Abbreviations:
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CLP: Classification, Labeling, Packaging.
DNEL: Derived No Effect Level.
EINECS: European Inventory of Existing Commercial Chemical Substances.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
LTE: Long-term exposure.
PNEC: Predicted No Effect Concentration.

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RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE: Short-term exposure.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.

16.2 Key literature references and sources for data:
- Manufacturers safety data sheet.
- IUCLID Data Bank (European Commision – European Chemicals Bureau);
- ESIS – European Chemical Substances Information System (European Chemicals Bureau).
- www.inchem.org
- GESTIS
- www.chem.unep.ch
- http://toxnet.nlm.nih.gov

Disclaimer:
This material safety data sheet does not constitute a guarantee of the properties of the product and is not a contractual legal report. The information is given in good faith on the basis of our best knowledge of the product at the indicated time. However, we cannot accept responsibility or liability for any consequences arising from its use, no warranty for correctness and completeness is given. We caution the users against the incurred possible risks when the product is used at other ends than the use for which it was initially planned. It is the user's responsibility during handling, storage and product use to consult the main regulatory texts in force regarding workers and environment protection.