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

1.1 Identification of the substance :

Trade name:	**Magnesium sulphate heptahydrate**
Chemical name:	Magnesium sulphate heptahydrate
Identification number:	CAS No: 10034-99-8
Registration number:	01-2119486789-11-0032

1.2 Use of the substance :

Identified uses:	mineral supplement, special applications
Unrecommended uses:	---

1.3 Company/undertaking identification :

Oregon Chem Group Spa | Santa Victoria 0372, Providencia.

+56 2 2635 2640 / 2641

info@oregonchem.com

1.4 Emergency telephone:

The first aid details may be consulted with toxicological information centre (TIS): Job-related illness clinic, Na Bojišti 1, 128 08 Praha 2, tel. 2 24 91 92 93 or 2 24 91 54 02. Permanent poisoning informations.

2: Hazard identification

The substance **is NOT classified as dangerous** according to Directive 1272/2008/ES.

2.1 Classification of the substance:

Acc. to Directive 1272/2008/ES	---

The most important adverse physicochemical, human health and environmental effects and symptoms :

May be harmful on ingestion. May cause nausea, vomiting, irritation of skin, eyes and respiratory tract.

The information shown on the label shall be given under heading 15.

2.2 Information on the label:

Hazard pictogram	**---**	*Signal word*	---
Hazard statements	---		
Precautionary statements	---		
Additional information on label	none		

2.3 Other dangerousness:

Substance is NOT classified as PBT or vPvB.

3: Composition / information on ingredients

3.1 Substance

3.1.1 Constituent

Chemical identity	*Index No.*	*CAS*	*EINECS*	*concentration*	*classification list number*
Magnesium sulphate heptahydrate	none	10034-99-8	231-298-2	99 - 100%	So far none

***3.1.2* Impurities, stabilizers,**

Chemical identity	*Index No.*	*CAS*	*EINECS*	*concentration*	*classification list number*
none	- - -	- - -	- - -	- - -	- - -

4: First aid measures

In all cases provide the physical and mental rest and avoid of getting chilled. In case of health problems or doubts inform physician and provide him with the information contained in this safety data sheet**.** Never pass a medication to a unconscious person. Maintain personal safeness during rescue operation.

4.1 First aid description:

If inhaled:

Stop exposition, move the afflicted person to the fresh air, keep him warm and at rest. If symptoms persist seek medical attention. In case of unconsciousness start with resuscitation (artificial respiration, cardiac massage) and call for medical attention.

In the event of skin contact:

Remove contaminated clothes and footwear**.** Wash of any skin contamination with cool water and soap. Launder clothes before re-use. In case of persisting irritation contact physician .

In the event of eye contact:

Remove contact lenses if present. Rinse with a small amount of water for at least 10 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical attention.

Do not use neutralization solution!

If swallowed:

Wash out mouth with water and give plenty of water to drink (at least 300 ml). Do not induce vomiting. Seek medical attention. When vomiting, maintain supervision until the help arrives. Obtain medical advice if symptoms persist.

4.2 The most important acute and belated symptoms and effects:

Skin , airways or eye irritation. After consumption of a bigger amount vomiting and diarrhoea, alimentary tract irritation may appear. Symptoms: red skin, eyes, blurred vision.

4.3 Immediate medical help instruction and special treatment:

Effects of acute toxicity of magnesium are compensated by the use of calcium tartrate

5: Fire fighting measures *5.1*

Extinguishing media:

Suitable extinguishing media:

Non-combustible substance . All extinguishing media are allowed, select the appropriate extinguishing media depending on the surrounding fire and environment. ***Not suitable extinguishing media :***

Strong water jet

5.2 Specific hazards :

Non-combustible substance. At temperatures over 700 °C decomposition occurs with release of gaseous sulfur dioxide.

5.3 Special protective actions for fire-fighters:

In case of fire use respirator with protective filter against the sulfur dioxide vapors and protective clothing.

6: Accidental release measures

6.1 Personal precautions:

Use personal safety working clothes – section 8. Prevent from skin and eye contact. Do not inhale dust. Well ventilate areas. Prevent from dust making. Other safety precautions – section 7.

6.2 Environmental precautions:

Prevent from escape to watercourses and soil and from their contamination. If there is no way to avoid it, immediately inform appropriate authority (police and firemen).

6.3 Methods for cleaning up:

Clean up contamination/spillages as soon as they occur. Collect as much as possible in a suitable clean container, preferably for re-use, otherwise for disposal (according section 13). Avoid generation of dust. Wash the spillage area with large quantities of water. When packaging is damaged, replace the amount into a new packaging with proper marking.

6.4 Other sections references:

Also follow the regulations in sections 8 and 13 of this safety data sheet.

7: Handling and storage

7.1 Handling:

Use the personal safety tools (section 8). Ensure fresh water for the first aid. Maintain the cleanness and tidiness on the working area. Provide basic employee training to prevent / minimize exposures and to report any healthy problems that may develop. Do not eat, drink or smoke during work. Avoid contact with skin and eyes. Wash hands duly with soap and water, take a shower. Use a body lotion.

7.2 Storage:

Store at a dry and well ventilated place, not above normal room temperature. Store in tightly closed packages.

7.3 Specific uses:

Industrial chemical, component of food supplements

8: Exposure controls / personal protection

8.1 Exposure limit values

8.1.1 Exposure limits

- not specified

8.1.2 Biological limit values:

- not specified

8.1.3 DNEL and PNEC values:

- not specified

8.2 Exposure control

8.2.1 Occupational exposure control:

Operate in a well-ventilated area, avoid inhalation of dusts or mists (for liquids). Ensure shower and area for eyes rinsing. The mentioned personal safety instruments should be in compliance with EN standards.

Personal protective equipment:

Respiratory protection:	In the case of high dust levels wear suitable respiratory protective equipment, ie. dust mask or respirator conforming to EN standards. Recommended filter = particle filter,P2.

Hand protection:	Wear suitable chemical resistant protective gloves for frequent or prolonged operations tested to EN374 with an acceptable permeation test. Suitable materials include neoprene (chloroprene), PVC and nitrile rubber. Break through time is > 480 min. Contaminated gloves should be carefully rinsed with water before reuse. Non suitable materials: Leather gloves.
Eye / face protection:	Wear suitable eye/face protection. Most materials for protective googles and face visors will probably be suitable eg. polycarbonate.
Skin and body protection:	Normal working clothes is suitable.

Do not eat, drink or smoke during work. Immediately remove contaminated clothing. Wash hands duly with soap and water, take a shower. Use a body lotion.

8.2.2 Environmental exposure controls:

Prevent from escape to environment.

9: Physical and chemical properties *9.1*

General information :

Physical state (at 20 °C):	Solid - crystals
Colour:	White
Odour (fragrance):	odourless
Treshold odour value:	odourless
9.2 Important health, safety and environmental information :	
pH (at 20 °C):	5,0 – 9,2 (5 % solution at 20 °C)
Melting point:	150 °C
Boiling point:	200 °C
Flash point:	Not applicable, incombustible matter
Evaporation rate:	Not applicable
Flamability** (solid, gas) **:	The substance is non-flammable

Explosion limits	*lower:* *upper:*	Not available, non-explosive matter Not available, non-explosive matter
Vapour pressure:		irrelevant
Vapour density:		irrelevant
Relative density:		1,69 g/cm^3
Water solubility (at 20 °C) :		34 g / 100 ml
Solubility in solvents:		Not available
Partition coefficient n-octanol/water:		Not available
Self-ignition temperature:		Not applicable
Decomposition temperature:		700 °C
Viscosity:		Not applicable
Explosive properties:		The substance is non-explosive
Oxidizing properties:		The substance is non-oxidizing
9.3 Other information:		
Fat solubility:		Not available
Conductivity:		Not available
Gas group:		Not applicable

10: Stability and reactivity

Stable under recommended storage and handling conditions.

10.1 Conditions to avoid:

Humidity and moisture.

10.2 Materials to avoid:

10.3 Hazardous decomposition products:

None at normal use. At temperatures over 700 °C decomposition occurs with release of gaseous sulfur dioxide.

11: Toxicological information

Acute toxicity:	
- LD_{50} oral, rat (mg.kg^{-1}):	2200 (as anhydrous), OECD 425, Information given is based on data obtained from similar substances
- LD_{50} dermal, rat (mg.kg^{-1}):	> 2.000 mg/kg, rat, OECD Test Guideline 402, Information given is based on data obtained from similar substances
- LC_{50} inhalation, rat, for aerosols or particles (mg.l^{-1}):	Not available
Skin irritation:	No irritation, EU Method B.46, , Information given is based on data obtained from similar substances
Eye irritation:	Rabbit, Result :No irritation, OECD Test Guideline 402, Information given is based on data obtained from similar substances
Sensitisation:	Mouse, Result : Does not cause skin sensitization, OECD Guideline 429, anhydrous substance
Carcinogenicity:	Not available (according to experience not expected)
Mutagenicity:	Negative, OECD Guideline 476, anhydrous substance
Toxicity for reproduction:	Rat, NOAEL : ≥ 1500 mg/kg, OECD Guideline 422, Information given is based on data obtained from similar substances
Teratogenicity	Rat, NOAEL : ≥ 1500 mg/kg, OECD Guideline 422, Information given is based on data obtained from similar substances
Toxicity for specific target body – single exposition	Substance does not have toxic effects within single exposition
Toxicity for specific target body – repeated exposition:	Rat, NOAEL : ≥ 256 mg/kg, OECD Test Guideline 453, Information given is based on data obtained from similar substances
Irritation if inhaled:	Substance does not have irritable effects
Other information: Health injuries are not known or expected under normal use.	

12: Ecological information

12.1

Ecotoxicity:

- LC_{50} 96 hr., fish (mg.l^{-1}):	14 000	REF. 1
- EC_{50} 48 hr., daphnia (mg.l^{-1}):	1 700	REF. 1
- EC_{50} 72 hr. algae (mg.l^{-1}):	2 700	REF. 1
- EC_{50} 30 min. bacteria (mg.l^{-1}):	84 000	REF. 1
12.2 Mobility :	Not specified	
12.3 Persistence and degradability:	Not specified (not relevant for inorganic substances)	
12.4 Bioacumulative potential:	Not specified	

12.5 Results of PBT assessment:	Substance is not classified as PBT or vPvB.

12.6 Other adverse effects:
Not specified.

13: Disposal considerations

13.1 Product:
If recycling or reuse is not practical then the product must be disposed of by authorized personnel in accordance with local, state or national regulations. Never dispose by flushing into the drainage! Waste former is responsible for its sorting and disposal.

Special safety precaution for recommended waste treatment:
Preferably dispose in independent container.

13.2 Packaging:
If recycling or reuse is not practical then packaging must be disposed of by authorized personnel in accordance with local, state or national regulations. Clean packaging with water and dispose of washings in accordance to local regulations. Packaging can be passed to a packaging return system after the cleaning.

13.3 Legal waste regulations: Directive 2008/98/ES
National or regional provisions may be in force !

14: Transport information

14.1 *ADR/RID* (Land Transport) *:*	Not classified as hazardous for transportation.
14.2 ADN/ADNR (Inland Waterway Transport)*:*	Not classified as hazardous for transportation.
14.3 IMDG (Marine Transport) :	Not classified as hazardous for transportation.
14.4 ICAO/IATA (Air Transport) :	Not classified as hazardous for transportation.

15: Regulatory Information

15.1 Health, safety and environmental information on the label : ---

15.2 Chemical Safety Assessment: Not available.

15.3 National legislation:
Regulation (EC) No. 1907 / 2006 / ES, REACH
Regulation (EC) No. 1272 / 2008 / ES, CLP
National laws or provisions may be in force !

16: Other information

Changes made in Safety Data Sheet in terms of revision:
Elaboration of new Safety data sheet in terms of avoidance of Directive 67/548/EHS

Key or explanation for abbreviations:
DNEL Derived No Effect Level (derived concentration of substance, at which no unfavourable effects occure)

PNEC Predicted No Effect Concentration (prediction of substance concentration, at which no unfavourable effects occure)
PEL Acceptable exposure limit, long-term (8 hours)

Important literature references and data sources:
SDS of other producers, special literature, ECHA web. site http://apps.echa.europa.eu/registered/registered-sub.aspx)

REF. 1 INNOLAB GmbH & Co. KG, Niedervellmarsche Str. 30, 34233 Fuldatal, Project No. 04926035, 1994

Training instructions:
According to Safety Data Sheet.

Recommended restrictions of use:
Not specified

Other :
The information contained herein were processed and compiled in accordance with the latest state-of-the-art. Although having been compiled in an utmost good faith, they do not deliver or guarantee any of the product properties, thus they cannot constitute an official base for any contract or legal relation. Various factors may affect the properties under certain conditions. It is the user sole responsibility to assess and consider the accuracy and veracity of the aboveindicated information in particular application and/or environment.