SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 11/08/2017 Version 1.2

SECTION 1.Identification

Product identifier

Product number	MX0070
Product name	Magnesium Sulfate Heptahydrate GR ACS
CAS-No.	10034-99-8

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

Identified uses	Reagent for analysis

Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS-Labeling

Not a dangerous substance according to GHS.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	$MgSO_4 * 7 H_2O$	MgO_4S*7H_2O
	(Hill)	
Molar mass	246.48 g/mol	
Remarks	No hazardous ingredients according to the OSHA Hazard Communication Standard 29 CFR 1910.1200.	

SECTION 4. First aid measures

Description of first-aid measures

Inhalation
After inhalation: fresh air.

Skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

Ingestion
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed
Diarrhea, Nausea, Vomiting

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

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
Not combustible.
Ambient fire may liberate hazardous vapors.
Fire may cause evolution of:
Sulfur oxides

Advice for firefighters

Special protective equipment for fire-fighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling
Observe label precautions.

Conditions for safe storage, including any incompatibilities
Tightly closed. Dry.

Store at room temperature.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)
Contains no substances with occupational exposure limit values.

Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance.

Eye/face protection
Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).
The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Respiratory protection
required when dusts are generated.
Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	colorless
Odor	odorless
Odor Threshold	Not applicable
pH	5.0 - 8.0 at 50 g/l 77 °F (25 °C)
Melting point	No information available.
Boiling point	No information available.
Flash point	does not flash
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	No information available.
Relative vapor density	No information available.
Density	1.68 g/cm3 at 68 °F (20 °C)
Relative density	No information available.
Water solubility	710 g/l at 68 °F (20 °C)

Partition coefficient: n-octanol/water	Not applicable
Autoignition temperature	No information available.
Decomposition temperature	> 302 °F (> 150 °C) Elimination of water of crystallization 2,055 °F (1,124 °C) (anhydrous substance)
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	not combustible
Bulk density	ca.900 kg/m3

SECTION 10. Stability and reactivity

Reactivity
See below

Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions
no information available

Conditions to avoid
Heating (decomposition).

Incompatible materials
no information available

Hazardous decomposition products
in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact, Ingestion

Specific target organ systemic toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information
Toxic effects are only to be expected at very high doses.
Systemic effects:
After uptake of large quantities:
Nausea, Vomiting, Diarrhea
However, when the product is handled appropriately, hazardous effects are unlikely to occur.
Therapeutically used substance.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish
LC50 Gambusia affinis (Mosquito fish): 15,500 mg/l; 96 h (IUCLID)

Toxicity to daphnia and other aquatic invertebrates
EC50 Daphnia magna (Water flea): 1,700 mg/l; 24 h (IUCLID)

Toxicity to algae
IC50 Desmodesmus subspicatus (green algae): 2,700 mg/l; 72 h (IUCLID)

Toxicity to bacteria
EC50 Photobacterium phosphoreum: 84,000 mg/l; 30 min (anhydrous substance) (IUCLID)

Persistence and degradability
Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential
Partition coefficient: n-octanol/water
Not applicable

Mobility in soil
No information available.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

Air transport (IATA)

Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. Regulatory information

United States of America

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Remarks
No components are subject to the Massachusetts Right to Know Act.

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

TSCA:	All components of the product are listed in the TSCA-inventory.
DSL:	All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date11/08/2017

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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