

MATERIAL SAFETY DATA SHEET

EAS™, Electron Acceptor Solution

D.O.T. HAZARD CLASSIFICATION: NONE

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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: **EAS™, Electron Acceptor Solution**
Product Description: **Magnesium sulfate, water solution**
CAS NUMBER: 7487-88-9

SECTION II - COMPOSITION

Chemical Name	CAS#	Wt%	OSHA PEL	ACGIH TLV
Sulfuric acid, magnesium salt; Magnesium sulfate	7487-88-9	5 – 27%	Not Established	Not Established
Water	7732-18-5	Balance	Not Established	Not Established

SECTION III - HAZARDS IDENTIFICATION

Emergency Overview: Colorless, transparent, odorless liquid. Noncombustible. At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated. May cause mild eye irritation.

Eye contact: May cause mild irritation to the eyes.

Skin contact: No known adverse effects.

Inhalation: Causes nausea, vomiting, abdominal cramps, and diarrhea.

Ingestion: Causes nausea, vomiting, abdominal cramps, and diarrhea.

Chronic hazards: No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen.

Physical hazards: Spilled material can be slippery.

SECTION IV - FIRST AID MEASURES

Eye: In case of contact, immediately flush eyes out with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

Skin: Not applicable.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: If large quantities of this material are swallowed, call a physician immediately. Do NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammable limits: This material is noncombustible.
Extinguishing Media: This material is compatible with all extinguishing media
Hazards to fire-fighters: See Section III for information on hazards when this material is present in the area of a fire.
Fire-fighting equipment: The following protective equipment for fire fighters is recommended when this material is present in the area of a fire: chemical goggles, body-covering protective clothing, self-contained breathing apparatus.

SECTION VI - ACCIDENTAL RELEASES

Personal protection: Wear chemical goggles, See section VIII
Environmental Hazards: Sinks and mixes with water. No adverse effects known. Not a listed toxic chemical under SARA Title III, §313 40 CFR Part 372. Not a CERCLA Hazardous Substance under 40 CFR Part 302.
Small spill cleanup: Mop up discharged material. Flush residue with water. Observe environmental regulations.
Large spill cleanup: Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent runoff from entering into storm sewers and ditches which lead to natural waterways. Isolate, dike and store discharged material, if possible. Use sand or earth to contain spilled material. If containment is impossible, flush with large quantities of water.
CERCLA RQ: There is no CERCLA Reportable Quantity for this material.

SECTION VII - HANDLING & STORAGE

Handling: Avoid breathing mist. Promptly clean up spills.
Storage: Keep containers closed. Recommended storage temperature 50°-120°F.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use with adequate ventilation. Safety shower and eyewash fountain should be within direct access.
Respiratory protection: Use a NIOSH-approved dust and mist respirator where mist occurs. Observe OSHA regulations for respirator use (29 C.F.R. §1910.134)
Skin protection: Wear gloves if irritation occurs.
Eye protection: Wear chemical goggles.

SECTION IX - PHYSICAL & CHEMICAL PROPERTIES

Appearance: Transparent liquid.
Color: Colorless.
Odor: Odorless.
pH: Approximately 8.5
Specific gravity: 1.22 g/cm³ at 20° C for a 20% solution
Solubility in water: Miscible.

SECTION X - STABILITY & REACTIVITY

Stability: This material is stable under all conditions of use and storage.
Conditions to avoid: None.
Materials to avoid: Metal hydrides and other water reactive materials.
Hazardous decomposition products: At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated.

SECTION XI - TOXICOLOGICAL INFORMATION

Acute Data: When tested for primary irritation potential, a similar material caused mild eye irritation.

RTECS reports the following data for magnesium sulfate:
Oral TDLo= 428 mg/kg in man 351 mg/kg in women

SECTION XII - ECOLOGICAL INFORMATION

Eco toxicity: Data not available.
Environmental Fate: This material is not persistent in aquatic systems and does not contribute to BOD. It does not bioconcentrate up the food chain.
Physical/Chemical: Sinks and mixes with water.

SECTION XIII - DISPOSAL CONSIDERATIONS

Classification: Disposed material is not a RCRA hazardous waste.
Disposal Method: Dispose in accordance with local, state, and federal regulations.

SECTION XIV - TRANSPORTATION INFORMATION

DOT UN Status: This material is not regulated hazardous material for transportation.

SECTION XV - REGULATORY INFORMATION

CERCLA: No CERCLA Reportable Quantity has been established for this material.
SARA TITLE III: Not an Extremely Hazardous Substance under §302. Not a Toxic Chemical under §313.
Hazard Categories under §§311/312: Acute
TSCA: All ingredients of this material are listed on the TSCA inventory.

SECTION XVI - OTHER INFORMATION

The information contained herein is based on available data and is believed to be correct. However, EOS Remediation, LLC. makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained thereof. This information and product are furnished on the condition that the person receiving them shall make his/her own determination as to the suitability of the product for his/her particular purpose.