

*Trade Name:* **Epsom Salt, Magnesium Sulfate, U.S.P.**

*Date Prepared:* **03/07/05**

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

*Product name:* **Epsom Salt, Magnesium Sulfate, U.S.P.**  
*Product description:* **Magnesium sulfate, heptahydrate**  
*Manufacturer:* **PQ Corporation**  
**P. O. Box 840**  
**Valley Forge, PA USA**  
**Phone number: 610-651-4200**

*In case of emergency call:* **1 610-651-4200**  
*For transportation emergency*  
*Call CHEMTREC:* **1 800-424-9300**

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

<i>Chemical and Common Name</i>	<i>CAS Registry Number</i>	<i>Wt. %</i>	<i>OSHA PEL</i>	<i>ACGIH TLV</i>
<b>Magnesium sulfate, heptahydrate; Epsom salt</b>	<b>10034-99-8*</b>	<b>100%</b>	<b>Not Established</b>	<b>Not Established</b>

\* Under the Toxic Substances Control Act (TSCA), hydrates are considered as mixtures of their anhydrous salt and water. Accordingly, the CAS Numbers 7487-88-9, 7732-18-5 are used for purposes of TSCA.

## 3. HAZARDS IDENTIFICATION

*Emergency Overview:* **White or transparent crystalline odorless powder. Noncombustible. At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated. Causes mild eye irritation.**

*Eye contact:* **Causes 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.**

## 4. FIRST AID MEASURES

*Eye:* **In case of contact, immediately flush eyes 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.**

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*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.

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## **5. FIRE FIGHTING MEASURES**

*Flammable limits:* This material is noncombustible.  
*Extinguishing Media:* This material is compatible with all extinguishing media.  
*Hazards to fire-fighters:* See Section 3 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.

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## **6. ACCIDENTAL RELEASE MEASURES**

*Personal protection:* Wear chemical goggles, See section 8.  
*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:* Sweep, scoop or vacuum 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. Sweep, scoop or vacuum discharged material. Flush residue with water. Observe environmental regulations.  
*CERCLA RQ:* There is no CERCLA Reportable Quantity for this material.

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## **7. HANDLING AND STORAGE**

*Handling:* Avoid breathing dust. Promptly clean up pills.  
*Storage:* Keep containers closed. Protect from extremes of temperature and humidity during storage. Recommended storage conditions 68-110° F and 54-87% relative humidity.

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## **8. 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 respirator where dust occurs. Observe OSHA regulations for respirator use (29 C.F.R. §1910.134)  
*Skin protection:* Wear gloves if abrasion or irritation occurs.  
*Eye protection:* Wear chemical goggles.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance: **Crystalline odorless powder.**  
Color: **White or transparent.**  
Odor: **Odorless.**  
pH: **Approximately 6-7**  
Specific gravity: **1.76 g/cm<sup>3</sup>, Bulk Density Approximately 1.05 g/cm<sup>3</sup>**  
Solubility in water: **71g/100 ml at 20° C, 91g/100 ml at 40° C**

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#### **10. STABILITY AND 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.**

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#### **11. TOXICOLOGICAL INFORMATION**

Acute Data: **When tested for primary irritation potential, this material caused mild eye irritation. RTECS reports Oral TDLo= 428 mg/kg in man 351 mg/kg in women**

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#### **12. 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.**

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#### **13. DISPOSAL CONSIDERATIONS**

Classification: **Disposed material is not a hazardous waste.**  
Disposal Method: **Landfill according to local, state, and federal regulations. Disposed material is not a RCRA Hazardous waste.**

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**14. TRANSPORT INFORMATION**

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

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**15. 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.**  
FDA: **Magnesium sulfate is authorized by FDA GRAS substance pursuant to 21 CFR 184.1443.**

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**16. OTHER INFORMATION**

Prepared by: **John G. Blumberg**  
Supersedes revision of: **03/23/04**

**THE INFORMATION ON THIS SAFETY DATA SHEET IS BELIEVED TO BE ACCURATE AND IT IS THE BEST INFORMATION AVAILABLE TO PQ CORPORATION THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONS FOR HANDLING A CHEMICAL BY A PERSON TRAINED IN CHEMICAL HANDLING. PQ CORPORATION MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED WITH RESPECT TO SUCH INFORMATION OR THE PRODUCT TO WHICH IT RELATES, AND WE ASSUME NO LIABILITY RESULTING FROM THE USE OR HANDLING OF THE PRODUCT TO WHICH THIS SAFETY DATA SHEET RELATES. USERS AND HANDLERS OF THIS PRODUCT SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION PROVIDED HEREIN FOR THEIR OWN PURPOSES.**

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