

# SAFETY DATA SHEET

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

**Product Name** Epsom Salt, Magnesium Sulfate, U.S.P.  
**Alternative names** Magnesium sulfate, heptahydrate  
**CAS No.** 10034-99-8

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

**Identified use(s)** Pharmaceutical

### 1.3 Details of the supplier of the safety data sheet

**Company Identification** PQ Corporation  
P.O. Box 840  
Valley Forge  
PA 19482  
USA  
**Telephone:** +1 610-651-4200  
**E-Mail (competent person)** sds.uk@pqcorp.com

### 1.4 Emergency telephone number

**Emergency Phone No.** +1 800-424-9300

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**GHS Classification** Not classified as dangerous for supply/use.

**EC Classification** Not classified as dangerous for supply/use.

**Hazards summary** May cause mild eye irritation

### 2.2 Label elements

**Hazard pictogram(s)**

**Signal word(s)** Not applicable

**Hazard statement(s)** Not applicable

**Precautionary statement(s)** Not applicable

**2.3 Other hazards** Caution - spillages may be slippery.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Regulation (EC) No. 1272/2008 (CLP)

| Ingredient(s)                   | %W/W  | CAS No.    | EINECS No. / REACH Registration | Hazard symbol(s) and hazard statement(s) |
|---------------------------------|-------|------------|---------------------------------|--|
| Magnesium sulfate, heptahydrate | 100 % | 10034-99-8 | 231-298-2                       |  |

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

|              |   |
|--------------|---|
| Eye Contact  | If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. If symptoms persist, obtain medical attention. |
| Skin Contact | If irritation (redness, rash, blistering) develops, get medical attention.  |
| Inhalation   | Remove patient from exposure, keep warm and at rest. If symptoms develop, obtain medical attention.   |
| Ingestion    | Do not induce vomiting. Wash out mouth with water. If large amount swallowed or symptoms develop obtain medical attention.                            |

**4.2 Most important symptoms and effects, both acute and delayed** May cause mild eye irritation

## **SECTION 5: FIRE-FIGHTING MEASURES**

|  |   |
|--|---|
| <b>5.1 Extinguishing media</b>                                   |   |
| Suitable Extinguishing Media                                     | Compatible with all standard fire fighting techniques.  |
| Unsuitable extinguishing Media                                   | Not applicable.   |
| <b>5.2 Special hazards arising from the substance or mixture</b> | Inorganic powder or granules. Non-combustible.  |
| <b>5.3 Advice for fire-fighters</b>                              | Goggles. A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. |

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

|  |  |
|--|--|
| <b>6.1 Personal precautions, protective equipment and emergency procedures</b> | Goggles.<br>An approved dust mask should be worn if dust is generated during handling.<br>See Also Section 8.  |
| <b>6.2 Environmental precautions</b>   | Sinks and mixes with water.  |
| <b>6.3 Methods and materials for containment and cleaning up</b>               | Caution - spillages may be slippery. Contain spillages.<br>Dampening with water can reduce dust. Sweep or preferably vacuum up and collect in suitable containers for recovery or disposal. Observe Local Regulations. |
| <b>6.4 Reference to other sections</b>   | Not applicable.  |

## **SECTION 7: HANDLING AND STORAGE**

|   |   |
|---|---|
| <b>7.1 Precautions for safe handling</b>                                | Avoid generation of dust.<br>See Also Section 8.<br><br>Wear protective equipment to comply with good occupational hygiene practice.<br>Do not eat, drink or smoke at the work place. |
| <b>7.2 Conditions for safe storage, including any incompatibilities</b> | Keep container tightly closed and dry. Protect from extremes of temperature and humidity. Store bags flat until use.  |
| <b>7.3 Specific end use(s)</b>  | Not applicable.   |

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

| SUBSTANCE. | Occupational Exposure Limits   |
|------------|--|
|            | UK EH40: Dust<br>Total inhalable: WEL 10mg/m <sup>3</sup> 8h TWA. Respirable: WEL 4mg/m <sup>3</sup> 8h TWA. ACGIH: Particulates not otherwise classified<br>Inhalable TLV 10mg/m <sup>3</sup> 8h TWA. Respirable: TLV 3mg/m <sup>3</sup> 8h TWA.<br>OSHA: Inert or Nuisance Dust<br>Total dust : PEL 15mg/m <sup>3</sup> 8h TWA. Respirable fraction : PEL 5mg/m <sup>3</sup> 8h TWA. |

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

### 8.2.2 Personal Protection

#### Respiratory protection

Avoid inhalation of dusts. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or where there is any risk of the exposure limits being exceeded. Advice on respiratory protective equipment is given in the HSE (Health and Safety Executive) publication HS(G)53.

#### Eye/face protection

Safety spectacles. Goggles.

#### Skin protection

Wear suitable protective clothing and gloves. If abrasion or irritation occurs

### 8.2.3 Environmental Exposure Controls

Not applicable.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 Information on basic physical and chemical properties

|                                |  |
|--------------------------------|--|
| Appearance                     | Powder. White.                           |
| Odour                          | Odourless.                               |
| Odour Threshold (ppm)          |  |
| pH (Value)                     | 6 - 7 at 5% w/w in water.                |
| Freezing Point (°C)            | Not applicable.                          |
| Melting Point (°C)             | > 1000                                   |
| Boiling Point (°C)             | Not applicable.                          |
| Flash Point (°C) [Closed cup]  | Not applicable.                          |
| Evaporation rate               | Not applicable.                          |
| Flammability (solid, gas)      | Not applicable.                          |
| Explosive Limit Ranges         | Not applicable.                          |
| Vapour Pressure (mm Hg)        | Not applicable.                          |
| Vapour Density (Air=1)         | Not applicable.                          |
| Density (g/ml)                 | Not applicable.                          |
| Solubility (Water)             | 71 g/100 ml at 20°C, 91 g/100 ml at 40°C |
| Partition Coefficient          | Not applicable.                          |
| Auto Ignition Point (°C)       | Not applicable.                          |
| Decomposition Temperature (°C) | Not applicable.                          |
| Viscosity (mPa. s)             | Not applicable.                          |
| Explosive properties           | Not applicable.                          |
| Oxidising Properties           | Not applicable.                          |
| 9.2 Other information          | Not available.                           |

## **SECTION 10: STABILITY AND REACTIVITY**

### 10.1 Reactivity

Stable under normal temperature conditions and recommended use.

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

None known.

### 10.4 Conditions to avoid

Not available.

|  |   |
|--|---|
| <b>10.5 Incompatible materials</b>             | Metal hydrides and other water reactive materials.  |
| <b>10.6 Hazardous decomposition product(s)</b> | At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated. |

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

|                                  |  |
|----------------------------------|--|
| Ingestion                        | RTECS reports Oral TDLo= 428 mg/kg in man 351 mg/kg in women   |
| Inhalation                       | Dust may cause irritation                                      |
| Skin Contact                     | Dust may have a drying effect on the skin.                     |
| Eye Contact                      | Dust may cause discomfort and mild irritation.                 |
| <b>Skin corrosion/irritation</b> | Dust may cause irritation                                      |
| <b>Sensitisation</b>             | Not classified   |
| <b>Mutagenicity</b>              | Not classified   |
| <b>Carcinogenicity</b>           | Components are not listed by IARC, NTP or OSHA as carcinogens. |
| <b>Reproductive toxicity</b>     | Not classified   |
| <b>STOT - single exposure</b>    | Not classified   |
| <b>STOT - repeated exposure</b>  | Not classified   |
| <b>Other information</b>         | Not available.   |

## **SECTION 12: ECOLOGICAL INFORMATION**

|  |                                |
|--|--------------------------------|
| <b>12.1 Toxicity</b>                           | Not available.                 |
| <b>12.2 Persistence and degradability</b>      | Not available.                 |
| <b>12.3 Bioaccumulative potential</b>          |                                |
| <b>12.4 Mobility in soil</b>                   | Sinks in water                 |
| <b>12.5 Results of PBT and vPvB assessment</b> | Not classified as PBT or vPvB. |
| <b>12.6 Other adverse effects</b>              | Not available.                 |

## **SECTION 13: DISPOSAL CONSIDERATIONS**

|                                     |  |
|-------------------------------------|--|
| <b>13.1 Waste treatment methods</b> | Disposal should be in accordance with local, state or national legislation.<br>Not a hazardous waste under RCRA Sec.3001. This material is not classified as hazardous waste under EC Directive 2008/98/EC (and amendments). This material is not classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894. |
|-------------------------------------|--|

## **SECTION 14: TRANSPORT INFORMATION**

|  |  |
|--|--|
| <b>14.1 UN number</b>                    | Not classified as hazardous under DOT or US Transport Recommendations. |
| <b>14.2 Proper Shipping Name</b>         | Not applicable   |
| <b>14.3 Transport hazard class(es)</b>   | Not applicable   |
| <b>14.4 Packing group</b>                | Not applicable   |
| <b>14.5 Environmental hazards</b>        | Not applicable   |
| <b>14.6 Special precautions for user</b> | No special packaging requirements.                                     |

## **SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

TSCA Inventory Status: Reported/Included.

AICS Inventory Status: Reported/Included.

DSL/NDSL Inventory Status: Reported/Included.

Magnesium sulfate is an FDA GRAS substance pursuant to 21CFR 184.1443

HMIS:

Health Hazard: 0

Fire Hazard: 0

Reactivity: 0

**15.2 Chemical Safety Assessment****SECTION 16: OTHER INFORMATION**

This SDS was last reviewed: 07/2014

The following sections contain revisions or new statements: New Issue

EC Classification No. 67/548/EEC Not classified as dangerous for supply/use.

Hazard Symbol

Risk Phrases

Safety Phrases

Handle in accordance with good industrial hygiene and safety practices.

Avoid inhalation of dusts.

GHS Classification

Not classified as dangerous for supply/use.

Signal word(s)

Not applicable

Hazard pictogram(s)

Hazard statement(s)

Not applicable

Precautionary statement(s)

Not applicable

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