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## SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

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### 1.1 Product identifier :

Substance name : MgSO<sub>4</sub>, 50 mM, Molecular Biology Grade

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

Recommended restrictions on use : For professional users only.

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

Manufacturer / Supplier : ROJETechnologies

Street address / P.O. Box : ROJE street, 69<sup>th</sup> alley, Foroudgah blvd, Sanaat square, 8917357485,  
Yazd, Iran

Country ID / Postcode / Place : Iran

Telephone number : +98 35 3723 7122

TeleFax : +98 35 3723 7122

E-Mail : safety@rojetechnologies.co

National contact: ROJETechnologies

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## SECTION 2: Hazards Identification

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### Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health.

<b>Appearance</b>	Colorless
<b>Physical state</b>	Liquid
<b>Odor</b>	Mild

### 2.1 Principle Routes of Exposure

#### Acute toxicity

#### Inhalation

May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea,

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**Eyes**  
**Skin**

and vomiting.  
Redness. May cause slight irritation.  
Prolonged contact may cause redness and irritation.

Repeated exposure may cause skin dryness or cracking.

**Ingestion**

May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

**Chronic Effects**

**Chronic toxicity**

No information available

**Symptoms**

No information available.

**Aggravated Medical Conditions**

None known.

**Interactions with Other Chemicals**

No information available

**Environmental hazard**

See Section 12: ECOLOGICAL INFORMATION

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**SECTION 3: *Composition/Information on Ingredients***

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Chemical Name	Weight-%
Water	60-100
Magnesium Sulfate	1-5

The product contains no substances which at their given concentration, are considered to be hazardous to health

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**SECTION 4: *First Aid Measures***

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**General advice**

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

**Eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

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**Skin contact**

Wash skin with soap and water.

**Inhalation**

Remove to fresh air.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water.

**SECTION 5: Fire-Fighting Measures**

**Suitable extinguishing media**

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

**Unsuitable extinguishing media**

CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

No information available

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA Health hazards 0**

**Flammability 0**

**Stability 0**

**Special Hazard -**

**HMIS**

**Health hazards 0**

**Flammability 0**

**Physical hazards 0**

**Personal protection -**

**SECTION 6: Accidental Release Measures**

**Personal precautions**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment [PPE]**

Use personal protection recommended in Section 8.

**Environmental precautions**

See Section 12 for additional Ecological Information.

**Methods for containment**

Prevent further leakage or spillage if safe to do so.

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**Methods for cleaning up**

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

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**SECTION 7: Handling and Storage**

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**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice.

**Storage temperature**

Refer to company site for specific information.

**Storage Conditions**

Keep/store only in original container.

**Incompatible materials**

None known based on information supplied.

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**SECTION 8: Exposure Controls/Personal Protection**

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**Engineering controls**

Showers. Eyewash stations.

**Personal protective equipment (PPE)****Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin and body protection**

Wear suitable protective clothing and gloves.

**Respiratory protection**

Use in well ventilated areas.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice

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## SECTION 9: Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Colorless
Odor	Mild

#### Property

#### Remarks • Method

Melting point / freezing point	No information available
Boiling point / boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	No information available
Upper flammability limit	
Lower flammability limit	
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

#### **Other information**

Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available
Bulk density	No information available

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## SECTION 10: Stability and Reactivity

### Reactivity

#### Stability

Stable under normal conditions.

#### Possibility of hazardous reactions

Can react briskly with oxidizers - danger of explosion.

#### Conditions to avoid

Incompatible materials, Ignition sources, Heat.

#### Incompatible materials

Strong oxidizing agents.

#### Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: Toxicological Information

### Acute toxicity

#### Product information

Product does not present an acute toxicity hazard based on known or supplied information.

#### Inhalation

Avoid breathing vapors or mists. May cause irritation of respiratory tract.

#### Eye contact

Redness. May cause slight irritation.

#### Skin contact

Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.

#### Ingestion

May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Magnesium Sulfate	> 90 mL/kg ( Rat )	-	-

### Chronic toxicity

#### Skin corrosion/irritation

Mild

#### Serious eye damage/eye irritation

Mild

#### Irritation

Mild

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**Corrosivity**

Mild

**Sensitization**

**Skin**

No information available

**Respiratory**

No information available

**Germ cell mutagenicity**

No information available

**Carcinogenicity**

No information available

**Reproductive toxicity**

No information available

**Developmental toxicity**

No information available

**Teratogenicity**

No information available

**STOT - single exposure**

No information available

**STOT - repeated exposure**

No information available

**Chronic toxicity**

No information available

**Subchronic toxicity**

No information available

**Target organ effects**

Kidneys, Respiratory system, Eyes, Skin.

**Neurological effects**

No information available

**Other adverse effects**

No information available

**Aspiration hazard**

No information available

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**SECTION 12: Ecological Information**

**Marine pollutant**

No information available

**Ecotoxicity**

No information available

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Magnesium Sulfate	2700: 72 h Desmodemus subspicatus mg/L EC50	19000: 24 h Lepomis macrochirus mg/L LC50 static 2610 - 3080: 96 h Pimephales promelas mg/L LC50 static	1700: 24 h Daphnia magna mg/L EC50 266.4 - 417.3: 48 h Daphnia magna mg/L EC50 Static

**Persistence and degradability**

No information available

**Bioaccumulation**

No information available

**Mobility**

No information available

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**Other adverse effects**

No information available

**Ozone depletion potential (ODP)**

No information available

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### SECTION 13: Disposal Considerations

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#### Relevant Information

Keep out of drains, sewers, ditches and waterways.

#### Disposal considerations

Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

#### Contaminated packaging

Empty containers must be tripled rinsed prior to disposal.

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### SECTION 14: Transport Information

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<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>MEX</b>	Not regulated
<b>ICAO (air)</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG</b>	Not regulated
<b>RID</b>	Not regulated
<b>ADR</b>	Not regulated
<b>ADN</b>	Not regulated

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### SECTION 15: Regulatory Information

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#### International Inventories

<b>TSCA</b>	Complies
<b>DSL</b>	Complies
<b>NDSL</b>	Complies

Chemical Name	TSCA	DSL	NDSL
Water	Present	X	Not Listed
Magnesium Sulfate	Present	X	Not Listed

#### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory



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**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### SARA 311/312 Hazard Categories

<b>Acute health hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	No
<b>Sudden release of pressure hazard</b>	No
<b>Reactive hazard</b>	No

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

### International Regulations

#### **Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

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## SECTION 16: Other Information

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(i) Indication of changes: No information available

(ii) Abbreviations and acronyms: No information available

(iii) Key literature references and sources for data: No information available

(iv) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: No information available

(v) Relevant H-statements (number and full text): No information available

(vi) Training advice: No information available

(vii) Further information:

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.