

# **Scientific Documentation**

# Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED (TM)

Not appropriate for regulatory submission.

Please visit www.spectrumchemical.com or contact Tech Services for the most up-to-date information contained in this information package.

Spectrum Chemical Mfg Corp 769 Jersey Avenue New Brunswick, NJ 08901 Phone 732.214.1300





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# Specification for Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED (TM) (MA902)

Item Number	MA902
Item	Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED (TM)
CAS Number	10034-99-8
Molecular Formula	MgSO <sub>4</sub> •7H <sub>2</sub> O
Molecular Weight	246.48
MDL Number	
Synonyms	Epsom Salts

Test	Specifica	tion
	Min	Max
ASSAY (MgSO <sub>4</sub> ; ANHYDROUS BASIS)	99.0	100.5 %
pH OF A 5% SOLUTION @ 25°C	5.0	9.2
LOSS ON IGNITION	48.0	52.0 %
CHLORIDE		0.014 %
IRON (Fe)		20 µg/g
ELEMENTAL IMPURITIES	AS REPORTED	
SELENIUM		30 µg/g
MICROBIAL LIMITS:		
BACTERIAL ENDOTOXINS		0.09 EU/mg
TOTAL AEROBIC MICROBIAL COUNT		10 <sup>3</sup>
TOTAL COMBINED YEASTS AND MOLDS COUNT		102
CERTIFIED KOSHER		
CERTIFIED HALAL		
EXPIRATION DATE		
DATE OF MANUFACTURE		
APPEARANCE		
RESIDUAL SOLVENTS	TO PASS TEST	

Spectrum Chemical Mfg Corp

 769 Jersey Ave.
 14422 S. San Pedro St.

 New Brunswick, NJ 08901
 Gardena, CA 90248

 732.214.1300
 310.516.8000



# **Certificate Of Analysis**

Item Number	MA902	Lot Number	4LC0022
Item	Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED (TM)	Manufacturer Lot	MSH 0147
CAS Number	10034-99-8	Manufacturer Code	14819
Molecular Formula	MgSO <sub>4</sub> •7H <sub>2</sub> O	Molecular Weight	246.48

TFCT	SPECIFICATION		
TEST	MIN	MAX	RESULT
ASSAY (MgSO <sub>4</sub> ; ANHYDROUS BASIS)	99.0	100.5 %	99.89 %
pH OF A 5% SOLUTION @ 25 <sup>o</sup> C	5.0	9.2	5.9
LOSS ON IGNITION	48.0	52.0 %	49.86 %
CHLORIDE		0.014 %	<0.014 %
IRON (Fe)		20 µg/g	<20 μg/g
ELEMENTAL IMPURITIES	AS REPORTED		COMPLIES WITH STANDARD
SELENIUM		30 µg/g	<1.0 µg/g
MICROBIAL LIMITS:			
BACTERIAL ENDOTOXINS		0.09 EU/mg	<0.09 EU/MG
TOTAL AEROBIC MICROBIAL COUNT		10 <sup>3</sup>	<103
TOTAL COMBINED YEASTS AND MOLDS COUNT		10 <sup>2</sup>	<10 <sup>2</sup>
CERTIFIED KOSHER			CERTIFIED KOSHER
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			16-JAN-2025
DATE OF MANUFACTURE			16-JAN-2022
APPEARANCE			WHITE CRYSTALLINE POWDER
RESIDUAL SOLVENTS	TO PASS TEST		PASSES TEST

Certificate of Analysis Results Entered By:

TDAO Tiffany DAO 25-AUG-22 12:02:53

Spectrum Chemical Mfg Corp 777 Jersey Avenue New Brunswick 08901 NJ



All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.

Read and understand label and SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. It is the customer's responsibility to provide adequate hazardous material training and ensure that appropriate Personal Protective Equipment (PPE) is used before handling any chemical.

Spectrum Chemical Mfg. Corp. repackages Active Pharmaceutical Ingredient chemicals provided by other manufacturers and suppliers. For traceability purposes, Spectrum's Certificate of Analysis contains an identifier code unique to each manufacturer or supplier, as well as the chemical's lot number provided on the original manufacturer Certificate of Analysis. This material is manufactured by Macco Organiques, S.r.o. at Zahradni 1938/46c, Bruntal, Moravskoslezsky kraj 79201, Czech Republic (CZE). Copies of the original Certificate of Analysis are available upon request from your Spectrum Sales Representative or by calling Spectrum's Quality Department at 1-800-772-8786.

Certificate of Analysis Results Approved By:

AWILLIAMS Allison Williams 25-AUG-22 14:02:17

# SAFETY DATA SHEET

Revision date 10-February-2022

1. Identification		
Product identifier		
Product Name	Magnesium Sulfate, Heptahydrate, USP	
Other means of identification		
Product Code(s)	MA902	
Synonyms	None	
Recommended use of the chemica	l and restrictions on use	
Recommended use	No information available	
Restrictions on use	No information available	
Details of the supplier of the safety	data sheet	
Supplier Address Spectrum Chemical Mfg. Corp. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000		
Emergency telephone number		

**Emergency Telephone** 

Chemtrec 1-800-424-9300

### 2. Hazard(s) identification

#### **Classification**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements

#### Hazard statements

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

Appearance Crystalline powder or Crystals Physical state Solid

Odor Odorless



Revision Number 2

#### Other information

No information available.

# 3. Composition/information on ingredients

#### Substance

Chemical name	CAS No	Weight-%	Trade secret
Magnesium Sulfate, Heptahydrate	10034-99-8	100	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. First-aid measures

#### **Description of first aid measures**

Inhalation	Remove to fresh air.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash skin with soap and water.	
Ingestion	Clean mouth with water and drink afterwards plenty of water.	
Most important symptoms and effects, both acute and delayed         Symptoms       No information available.		
Indication of any immediate medical attention and special treatment needed		

Note to physicians Treat symptomatically.

#### 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.	
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.	
Specific hazards arising from the chemical	No information available.	
Hazardous combustion products	If it is involved in a fire the following can be released:. Sulfur oxides. Magnesium oxides.	
Explosion data Sensitivity to mechanical impac	t none.	
Sensitivity to static discharge	none.	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.	

#### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Methods and material for containment and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.	
Methods for cleaning up	Pick up and transfer to properly labeled containers.	

# 7. Handling and storage

Precautions for safe handling		
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.	
Conditions for safe storage, including any incompatibilities		
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place.	

#### 8. Exposure controls/personal protection

#### Control parameters

Exposure LimitsThe following ingredients are the only ingredients of the product above the cut-off level (or<br/>level that contributes to the hazard classification of the mixture) which have an exposure<br/>limit applicable in the region for which this safety data sheet is intended or other<br/>recommended limit. At this time, the other relevant constituents have no known exposure<br/>limits from the sources listed here.

#### Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, suc	ch as personal protective equipment
Eye/face protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

#### 9. Physical and chemical properties

Information on basic physical and chemical properties Physical state Solid

Crystalline powder or Crystals Appearance White: Colorless Color Odorless Odor **Odor threshold** No information available **Property** Values Remarks • Method no data available pН None known Melting point / freezing point no data available None known Boiling point / boiling range no data available None known Flash point no data available None known Evaporation rate no data available None known Flammability (solid, gas) no data available None known Flammability Limit in Air None known Upper flammability or explosive No data available limits Lower flammability or explosive No data available limits None known Vapor pressure No data available Vapor density no data available None known **Relative density** None known 1.67 Water solubility Soluble in water None known None known Solubility(ies) no data available None known No data available **Partition coefficient** Autoignition temperature no data available None known **Decomposition temperature** None known Kinematic viscosity no data available None known Dynamic viscosity No data available None known Other information **Explosive properties** No information available No information available **Oxidizing properties** Softening point No information available Molecular weight 246.48 No information available VOC Content (%)

#### 10. Stability and reactivity

Liquid Density

**Bulk density** 

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

#### 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

No information available

No information available

#### Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

No information available.

#### Acute toxicity

Numerical measures of toxicity No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Serious eye damage/eye irritation Respiratory or skin sensitization Germ cell mutagenicity	No information available. No information available. No information available. No information available.
Reproductive toxicity	No information available.
STOT - single exposure STOT - repeated exposure Aspiration hazard	No information available. No information available. No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

### 12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.	
Persistence and degradability Bioaccumulation	No information available. Inherently biodegradable.	
Other adverse effects	No information available.	

#### 13. Disposal considerations

#### Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

# 14. Transport information

DOT	not regulated
<u>TDG</u>	not regulated
MEX	not regulated
ICAO (air)	not regulated
IATA	not regulated

IMDG	not regulated
RID	not regulated
ADR	not regulated
ADN	not regulated

#### 15. Regulatory information

International Inventories

TSCA

Complies

DSL/NDSL EINECS/ELINCS	Complies Does not Comply
ENCS	This product complies with ENCS:
IECSC	This product complies with China:
KECL	Does not Comply
PICCS	Complies
AICS	All the constituents of this material are listed on the Australian Inventory of Chemical
	Substances (AICS).

Legend:

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

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

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

#### **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

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### 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.

#### **US State Regulations**

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

#### U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

#### U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

#### 16. Other information

NFPA Health hazards 0 Flammability 0 Instability 0 Physical and chemical properties -HMIS Health hazards 0 Flammability 0 Physical hazards 0 Personal protection X Key or legend to abbreviations and acronyms used in the safety data sheet Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit) Ceiling Maximum limit value Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) EPA (Environmental Protection Agency) Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) Japan GHS Classification Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization **Revision date** 10-February-2022 **Revision Note** No information available. Disclaimer

The information provided in this 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.

**End of Safety Data Sheet** 

# spectrum

#### Certification of Compliance with current Good Manufacturing Practices

Dear Valued Customer:

Spectrum Chemical Mfg Corp certifies that the following product(s) is produced, processed, packaged and held in compliance with current Good Manufacturing Practices (cGMP) in accordance with the applicable parts of 21 CFR, parts 210 and 211 of the Code of Federal Regulations.

Catalog Number	Product Name
MA902	Magnesium Sulfate, Heptahydrate, USP,
	bioCERTIFIED ™

Spectrum is an FDA registered and inspected Drug Establishment. Our United States Food and Drug Administration (USFDA) Registration numbers are as follows:

Spectrum-Gardena, CA:	2020632
Spectrum-New Brunswick, NJ:	2246824

Thank you for your interest in Spectrum products. If we may be of further assistance, please feel free to contact the Quality Assurance department at 310-516-8000 or via email at <u>gualityassurance@spectrumchemical.com</u>

Sincerely,

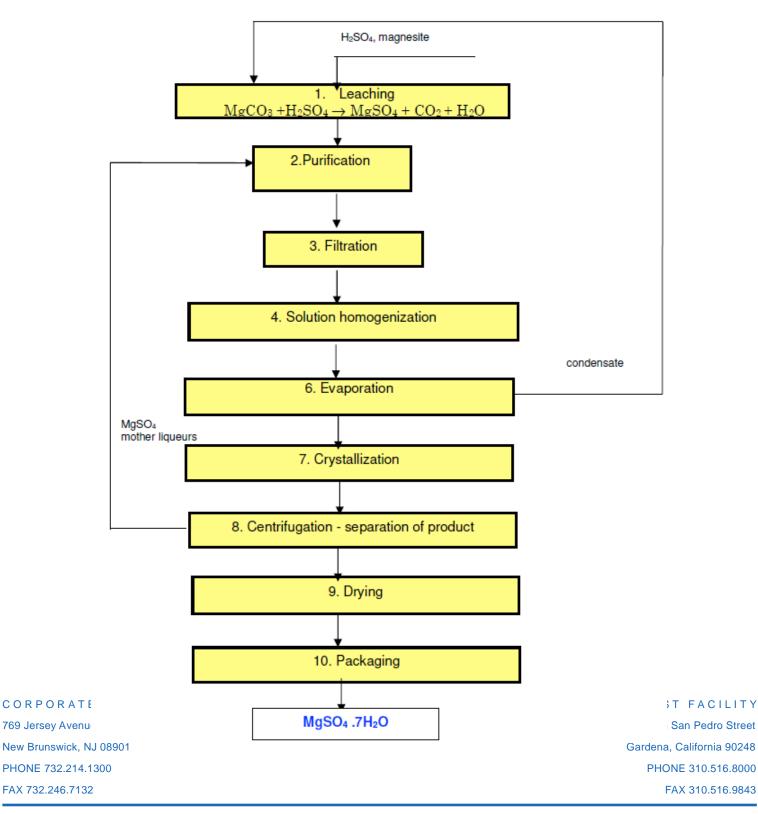
Oulu Clony

Oralia Chavez Quality Assurance Specialist



# Manufacturing Process Flowchart

Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED™ (Cat# MA902)



AN ISO 9001:2015 REGISTERED COMPANY

www.spectrumchemical.com

# MA902, Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED™

# **Source Statement**

The above mentioned catalog item is manufactured by chemical synthesis. No animal or plant derived products are used in the manufacturing process.

# **BSE/TSE Statement**

The above mentioned catalog item does not contain nor is manufactured using any animal derived products and is therefore, BSE/TSE free.

# **Allergen Statement**

The above mentioned catalog item does not contain any of the following:

- Milk
- Egg
- Fish
- Shellfish
- Tree Nuts
- Wheat
- Peanuts
- Soy

• Cereals containing Gluten

spectrum

- Celery
- Mustard
- Sesame Seed
- Corn
- Latex
- Sulfites > 10 ppm

# **EU Fragrance Allergen Statement**

The above mentioned catalog item does not contain any of the 26 EU fragrance allergens listed in Annex III lines 67-92. These substances are not intentionally added to the following chemical and therefore are not expected to be present.

## **GMO Statement**

The above mentioned catalog item is manufactured without the use of genetically modified organisms and is therefore GMO free.



# **Melamine Statement**

The above mentioned catalog does not use or add melamine to the manufacturing process and is considered melamine-free.

# **Nitrosamine Statement**

Based on knowledge of the manufacturing process, nitrosamine impurities are not known or suspected to be present in this material.

# **Animal Testing Statement**

The above mentioned catalog item has not been tested on animals.

## **Organic Compliance Statement**

The above mentioned catalog item has not been produced using GMOs, irradiation, ethylene oxide (EtO) or sewage sludge.

# Shelf Life Statement

The above-mentioned catalog item is typically assigned a shelf life of 36 months from the date of manufacture. The actual assigned shelf life for any specific lot should be referenced on the Certificate of Analysis.

## **Other Chemicals Statement**

Spectrum does not have any reason to suspect the above mentioned catalog item contains any of the following chemicals. This product does not come into contact with these chemicals during packaging or storage:

- Aflatoxins
- Antibiotics
- Bisphenol A (BPA)
- CMR Substances

- Parabens
- Pesticides
- Phthalates
- Preservatives



RE: Elemental Impurities - Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED™ (Catalog# MA902)

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

The above mentioned material complies with the USP<232>, <233> Elemental Impurities and the ICH Q3D Elemental Impurities Guideline. No Class 1, Class 2A, Class 2B or Class 3 elemental impurities are likely to be present. These substances are not used in the production process, are not intentionally added or known to be present in the above mentioned material.

This information is subject to change and is intended for risk assessment only. It is responsibility of the end user to evaluate suitability of any chemical for the intended use as well as to assess compound-specific limits of daily intake of metal impurities. For lot-specific information, please refer to the respective Certificate of Analysis.

If you have any further questions, please contact us by telephone at 1(800)772-8786 Option 2, or by email at <u>TechServices@spectrumchemical.com.</u>

Sincerely,

Technical Services Spectrum Chemical Mfg. Corp.

This document has been produced electronically and is valid without a signature.

#### CORPORATE HEADQUARTERS

769 Jersey Avenue New Brunswick, NJ 08901 PHONE 732.214.1300 FAX 732.246.7132

#### WEST COAST FACILITY

14422 South San Pedro Street Gardena, California 90248 PHONE 310.516.8000 FAX 310.516.9843



RE: Residual Solvents - Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED™ (Catalog# MA902)

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

The above mentioned catalog item complies with the requirements of the USP <467> Residual Solvents and the ICH Q3C Residual Solvents Guideline. No Class 1, Class 2, Class 3 or other solvents are used or produced in the manufacture of this product.

For lot-specific information, please refer to the respective Certificate of Analysis.

If you have any further questions, please contact us by telephone at 1(800)772-8786 Option 2, or by email at <u>TechServices@spectrumchemical.com.</u>

Sincerely,

Technical Services Spectrum Chemical Mfg. Corp.

This document has been produced electronically and is valid without a signature.

#### CORPORATE HEADQUARTERS

769 Jersey Avenue New Brunswick, NJ 08901 PHONE 732.214.1300 FAX 732.246.7132

#### WEST COAST FACILITY

14422 South San Pedro Street Gardena, California 90248 PHONE 310.516.8000 FAX 310.516.9843

AN ISO 9001:2015 REGISTERED COMPANY

# spectrum®

MgSO<sub>4</sub>•7H<sub>2</sub>O F.W. 246.48

# **Label Information**

The Spectrum label presents technical and safety information in an easily understood format. Our technical specialists stay abreast of the latest requirements of the Globally Harmonized System for Classification and Labelling of Chemicals (GHS), as well as the Occupational Safety and Health Administration (OSHA), the Food and Drug Administration (FDA) and other government regulatory agencies in order to ensure compliance, accuracy and concise hazard communication. Below you will find a typical label example for this catalog item.

#### Spectrum Chemical Mfg Corp

#### Corporate Headquarters:

769 Jersey Ave. New Brunswick, NJ 08901 *West Coast Facility:* 14422 S. San Pedro St. Gardena, CA 90248 310.516.8000

732.214.1300



בס"ד Jan 19, 2024

The following product(s) prepared by the named company are certified kosher with the stated requirements:

#### **Spectrum Laboratory Products, Inc.**

S-0032

14422 South San Pedro Street, Gardena, CA 90248 755-769 Jersey Ave. New Brunswick NJ 08901 USA	Product Name Brand UKD-ID D/P/M	MA902, Magnesium Sulfate, Heptahydrate, USP, bioCERTIFIED TM Spectrum KSAV3-L8O3M72 P
	Symbol Required	KSA
This certificate expires on <b>Feb 01, 2025</b>	<b>Special Conditions</b>	

Rabbi Binyomin Lisbon Kashrus Administrator

Placing the KSA logo on products not listed above constitutes an un-authorized use of the KSA symbol, which is a federally registered trademark.

ocument id: -1109432 P.O.Box 35721, Los Angeles, Ca 90035 - (310) 282-0444 - Fax (310) 282-0505 - Email info@ksakosher.com - www.ksakosher.com