

 Safety Data Sheet

 According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

 Revision Date: 03/12/2015
 Date of issue: 03/12/2015
 Supersedes Date: 03/09/2012

Version: 1.0

# **SECTION 1: IDENTIFICATION**

# **Product Identifier**

Product Form: Substance Product Name: Sodium Bicarbonate CAS No: 144-55-8 Formula: NaHCO<sub>3</sub>

Synonyms: Baking Soda

# **Intended Use of the Product**

Food Ingredient, Pharmaceutical, Household and Personal Care Product, Water Treatment, General Industrial Use.

# Name, Address, and Telephone of the Responsible Party

# Company

Church & Dwight 500 Charles Ewing Blvd Ewing Township, NJ 08628 T 1-800-524-1328

# www.churchdwight.com

# **Emergency Telephone Number**

**Emergency Number** : For Medical Emergency: 1-888-234-1828, For Chemical Emergency: 1-800-424-9300 (CHEMTREC)

# SECTION 2: HAZARDS IDENTIFICATION

The consumer variant of this product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC) and the Food and Drug Administration (FDA). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and FDA, and as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

# **Classification of the Substance or Mixture**

Classification (GHS-US) Not classified

# Label Elements

GHS-US Labeling No labeling applicable

<u>Other Hazards</u> Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Prolonged contact with dust can produce mechanical irritation.

Unknown Acute Toxicity (GHS-US) Not available

# SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>Substances</u>				
Name	: Sodium Bicarbonate			
CAS No	: 144-55-8			
Name		Product Identifier	% (w/w)	Classification (GHS-US)
Sodium bicarbonate		(CAS No) 144-55-8	100	Not classified
SECTION 4: FIRST AID MI	EASURES			

# **Description of First Aid Measures**

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

**Skin Contact:** Brush off loose particles from skin. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

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Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention if a large amount is swallowed.

# Most Important Symptoms and Effects Both Acute and Delayed

**General:** None expected under normal conditions of use.

Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

**Eye Contact:** Contact may cause irritation due to mechanical abrasion.

Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

# Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

# SECTION 5: FIRE-FIGHTING MEASURES

# **Extinguishing Media**

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: For surrounding fire: Use of heavy stream of water may spread fire.

# Special Hazards Arising From the Substance or Mixture

Fire Hazard: NOT FLAMMABLE . Under fire conditions, hazardous fumes will be present.

**Explosion Hazard:** Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

# **Advice for Firefighters**

**Precautionary Measures Fire:** Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. **Firefighting Instructions:** Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO<sub>2</sub>). Sodium oxides.

# Reference to Other Sections

Refer to section 9 for flammability properties.

# SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.

# For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

# For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

# **Environmental Precautions**

Prevent entry to sewers and public waters. Avoid release to the environment.

# Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Keep in suitable, closed containers for disposal. Contact competent authorities after a spill.

# Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

# SECTION 7: HANDLING AND STORAGE

# Precautions for Safe Handling

Additional Hazards When Processed: When heated, material emits irritating fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

# **Conditions for Safe Storage, Including Any Incompatibilities**

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Materials: Acids. Water. Lime.

Storage Temperature: < 65 °C (150 °F)

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Specific End Use(s) Food Ingredient, Pharmaceutical, Water Treatment, General Industrial Use

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

# **Control Parameters**

Particulates not otherwise classified (PNOC)				
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> Respirable fraction		
		10 mg/m <sup>3</sup> Total Dust		
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m <sup>3</sup> Respirable fraction		
		15 mg/m <sup>3</sup> Total Dust		
Alberta	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (total)		
British Columbia	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (total dust)		
Manitoba	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (inhalable particles, recommended)		
New Brunswick	OEL TWA (mg/m³)	3 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline		
		silica, respirable fraction)		
Newfoundland & Labrador	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (inhalable particles, recommended)		
Nova Scotia	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (inhalable particles, recommended)		
Nunavut	OEL TWA (mg/m³)	5 mg/m <sup>3</sup> (respirable mass)		
Northwest Territories	OEL TWA (mg/m³)	5 mg/m <sup>3</sup> (respirable mass)		
Ontario	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (inhalable)		
Prince Edward Island	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (inhalable particles, recommended)		
Québec	VEMP (mg/m³)	10 mg/m <sup>3</sup> (including dust, inert or nuisance particulates; containing no		
		Asbestos and <1% Crystalline silica-total dust)		
Saskatchewan	OEL STEL (mg/m³)	20 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction)		
		6 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable fraction)		
Saskatchewan	OEL TWA (mg/m³)	10 mg/m <sup>3</sup> (insoluble or poorly soluble-inhalable fraction)		
		3 mg/m <sup>3</sup> (insoluble or poorly soluble-respirable fraction)		

# **Exposure Controls**

**Appropriate Engineering Controls:** For occupational/workplace settings: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: For occupational or bulk quantities: Gloves. Safety glasses. Dust formation: dust mask.



Materials for Protective Clothing: For occupational or bulk quantities: Chemically resistant materials and fabrics.

Hand Protection: For occupational or bulk quantities: Wear chemically resistant protective gloves.

Eye Protection: For occupational or bulk quantities: Chemical goggles or safety glasses.

**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information: When using, do not eat, drink or smoke.

# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on Basic Physical and Chemical Properties** 

Physical State	: Solid
Appearance	: White, crystalline powder
Odor	: None
Odor Threshold	: Not available
рН	: 8.2 (1% Solution)
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available

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Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Upper/Lower Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Specific gravity / density	:	62 lb/ft <sup>3</sup>
Specific Gravity	:	Not available
Solubility	:	Water: 8.6 g/100ml @ 20 °C (68 °F)
Partition Coefficient: N-octanol/water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

Explosion Data – Sensitivity to Static Discharge

# SECTION 10: STABILITY AND REACTIVITY

**<u>Reactivity</u>:** Hazardous reactions will not occur under normal conditions.

**<u>Chemical Stability</u>**: Decomposes slowly on exposure to water (moisture).

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Exposure to moisture or moist air. Temperatures above 150°F (65 °C).

Incompatible Materials: Acids. Water. Lime.

Hazardous Decomposition Products: None known. At high temperature may liberate toxic gases.

# SECTION 11: TOXICOLOGICAL INFORMATION

# Information on Toxicological Effects - Product

Acute Toxicity: Not classified

# LD50 and LC50 Data:

Sodium B	icarbonat
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LD50 Oral Rat	7.3 g/kg
LC50 Inhalation Rat	> 4.7 mg/l/4h

Skin Corrosion/Irritation: Not classified [pH: 8.2 (1% Solution)]

Serious Eye Damage/Irritation: Not classified [pH: 8.2 (1% Solution)]

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Symptoms/Injuries After Eye Contact: Contact may cause irritation due to mechanical abrasion.

Symptoms/Injuries After Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

# **SECTION 12: ECOLOGICAL INFORMATION**

<b>Toxicity</b> No additional information ava	ilable	
Sodium Bicarbonate		
LC50 Fish 1	7100 mg/l Bluegill	
EC50 Daphnia 1	4100 mg/l	
LC 50 Fish 2	7700 mg/l Rainbow Trout	
Sodium bicarbonate (144-55-8)		
LC50 Fish 1	8250 - 9000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])	
EC50 Daphnia 12350 mg/l (Exposure time: 48 h - Species: Daphnia magna)		

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Persistence and Degradability Not established

**Bioaccumulative Potential** Not established

Mobility in Soil Not available

**Other Adverse Effects** 

Other Information: Avoid release to the environment.

# **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

# SECTION 14: TRANSPORT INFORMATION

In Accordance with DOTNot regulated for transportIn Accordance with IMDGNot regulated for transportIn Accordance with IATANot regulated for transport

**In Accordance with TDG** Not regulated for transport

# SECTION 15: REGULATORY INFORMATION

# **US Federal & International Regulations**

# Sodium Bicarbonate (144-55-8)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

# **US State Regulations**

Neither this product nor its chemical components appear on any US state lists.

## Canadian Regulations

Sodium bicarbonate (144-55-8)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

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

# SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

<b>Revision Date</b>
Other Information

: 03/12/2015

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

#### Party Responsible for the Preparation of This Document

Church & Dwight 500 Charles Ewing Blvd Ewing Township, NJ 08628 T 1-800-524-1328

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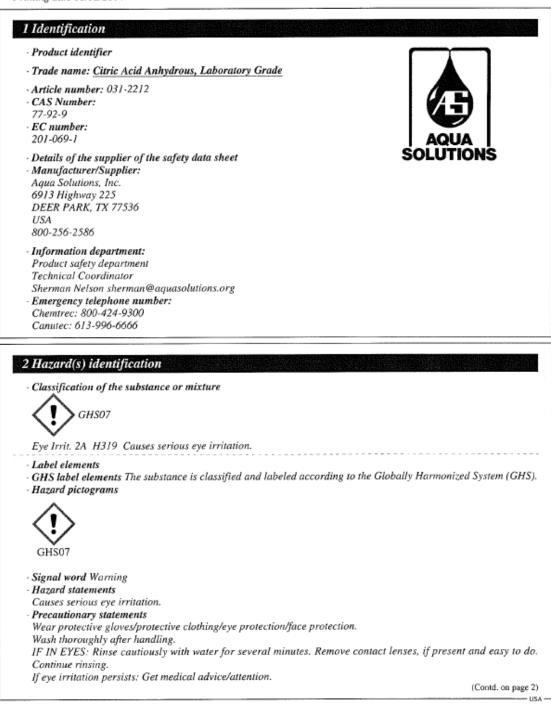
North America GHS US 2012 & WHMIS 2

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Reviewed on 02/03/2014



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Trade name: Citric Acid Anhydrous, Laboratory Grade

Fire = 0
 Fire = 0
 REACTIVITY 
 Reactivity = 0
 Other hazards
 Results of PBT and vPvB assessment
 PBT: Not applicable.

Health = 1

Health = 1 Fire = 0 Reactivity = 0

• vPvB: Not applicable.

Printing date 08/12/2014

· NFPA ratings (scale 0 - 4)

· HMIS-ratings (scale 0 - 4)

HEALTH

## 3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 77-92-9 Citric Acid, Anhydrous
- Identification number(s)
- EC number: 201-069-1

## 4 First-aid measures

· Description of first aid measures

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: If symptoms persist consult doctor.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

# 5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

## 6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Pick up mechanically.

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Trade name: Citric Acid Anhydrous, Laboratory Grade

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### 7 Handling and storage

Precautions for safe handling No special precautions are necessary if used correctly.

- Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.

- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.
- · Breathing equipment: Not required.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation • Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

#### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Trade name: Citric Acid Anhydrous, Laboratory Grade

(Contd. of page 3) Eye protection: Tightly sealed goggles 9 Physical and chemical properties Information on basic physical and chemical properties · General Information Appearance: Form: Crystalline Color: White Odor: Odorless · Odour threshold: Not determined. · pH-value (100 g/l) at 20 °C (68 °F): 1.6 · Change in condition Melting point/Melting range: Information not °C Boiling point/Boiling range: Information not °C Not applicable. · Flash point: · Flammability (solid, gaseous): Product is not flammable. 1010 °C (1850 °F) Ignition temperature: · Decomposition temperature: Not determined. Auto igniting: Not determined. · Danger of explosion: Product does not present an explosion hazard. · Explosion limits: Lower: Not determined. Not determined. Upper: · Vapor pressure: Not applicable. · Density at 20 °C (68 °F): 1.542 g/cm3 (12.868 lbs/gal) · Bulk density at 20 °C (68 °F): 900 kg/m<sup>3</sup> Relative density Not determined. · Vapour density Not applicable. · Evaporation rate Not applicable. · Solubility in / Miscibility with Water at 20 °C (68 °F): 600 g/l · Partition coefficient (n-octanol/water): Not determined. · Viscosity: Dynamic: Not applicable. Kinematic: Not applicable. • Other information No further relevant information available. -USA

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#### Trade name: Citric Acid Anhydrous, Laboratory Grade

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## 10 Stability and reactivity

- · Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

# 11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

Oral LD50 5040 mg/kg (mouse)

Intraperitoneal 375 mg/kg (rat)

#### Primary irritant effect:

- on the skin: No irritant effect.
- on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

#### · Carcinogenic categories

- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

# 12 Ecological information

- Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:
- Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pHvalue harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- · Results of PBT and vPvB assessment
- PBT: Not applicable.

vPvB: Not applicable.

· Other adverse effects No further relevant information available.

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#### Trade name: Citric Acid Anhydrous, Laboratory Grade

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## 13 Disposal considerations

· Waste treatment methods

 Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number DOT, ADN, IMDG, IATA	Not Applicable
UN proper shipping name DOT, ADN, IMDG, IATA	Not Applicable
Transport hazard class(es)	
DOT, ADN, IMDG, IATA Class	Not Applicable
Packing group DOT, IMDG, IATA	Not Applicable
Environmental hazards: Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	: II of Not applicable.
Transport/Additional information:	
DOT	Not Regulated
UN "Model Regulation":	•

## 15 Regulatory information

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

Section 355 (extremely hazardous substances): Substance is not listed.

- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.

Chemicals known to cause developmental toxicity: Substance is not listed.

· Carcinogenic categories

- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

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#### Trade name: Citric Acid Anhydrous, Laboratory Grade

(Contd. of page 6) • GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms



· Signal word Warning

- · Hazard statements
- Causes serious eye irritation.
- · Precautionary statements
- Wear protective gloves/protective clothing/eye protection/face protection.
- Wash thoroughly after handling.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

# 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing MSDS: Environment protection department.
- Contact: Mr. Nelson
- Date of preparation / last revision
- Creation date for SDS 08/12/2014 LS 08/12/2014 / -
- Abbreviations and acronyms:

ADR: Accord suropéen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

DOT: US Department of Transportation

ACGIH: American Conference of Governmental Industrial Hygienists

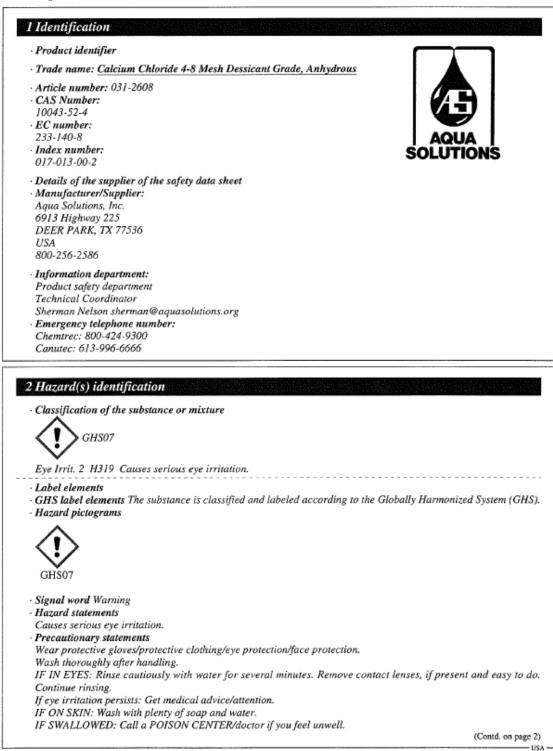
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA) LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

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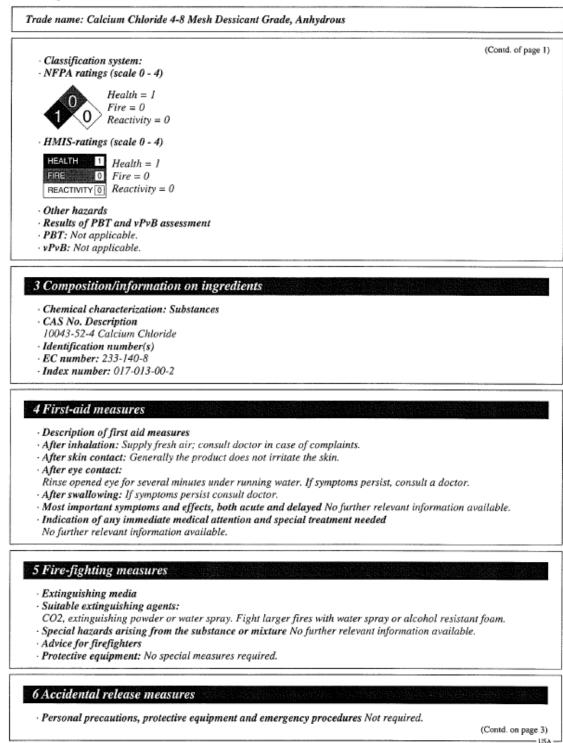


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#### Trade name: Calcium Chloride 4-8 Mesh Dessicant Grade, Anhydrous

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- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
   Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections

See Section 7 for information on safe handling.

- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

#### 7 Handling and storage

- · Precautions for safe handling Prevent formation of dust.
- Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- · Breathing equipment:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air. **Protection of hands:**
- The second

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation • Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

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Safety Data Sheet acc. to OSHA HCS

Printing date 08/12/2014

Reviewed on 02/17/2014

Trade name: Calcium Chloride 4-8 Mesh Dessicant Grade, Anhydrous

(Contd. of page 3) · Eye protection: Tightly sealed goggles 9 Physical and chemical properties · Information on basic physical and chemical properties · General Information · Appearance: Form: Powder White Color: Odor: Odorless · Odour threshold: Not determined. · pH-value: Not applicable. Change in condition Melting point/Melting range: 782 °C (1440 °F) > 1600 °C (> 2912 °F) Boiling point/Boiling range: · Flash point: Not applicable. · Flammability (solid, gaseous): Product is not flammable. · Ignition temperature: Decomposition temperature: Not determined. Auto igniting: Not determined. Danger of explosion: Product does not present an explosion hazard. · Explosion limits: Lower: Not determined. Upper: Not determined. · Vapor pressure: Not applicable. · Density at 20 °C (68 °F): 2.15 g/cm3 (17.942 lbs/gal) · Relative density Not determined. · Vapour density Not applicable. Evaporation rate Not applicable. · Solubility in / Miscibility with 740 g/l Water at 20 °C (68 °F): Partition coefficient (n-octanol/water): Not determined. · Viscosity: Dynamic: Not applicable. Kinematic: Not applicable. Other information No further relevant information available.

(Contd. on page 5)

USA

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# Safety Data Sheet acc. to OSHA HCS

#### Printing date 08/12/2014

Reviewed on 02/17/2014

Trade name: Calcium Chloride 4-8 Mesh Dessicant Grade, Anhydrous

#### (Contd. of page 4)

# 10 Stability and reactivity

- · Reactivity
- Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

#### 11 Toxicological information

· Information on toxicological effects

Acute toxicity:

· LD/LC50 values that are relevant for classification:

Oral LD50 1000 mg/kg (rat)

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

#### 12 Ecological information

#### Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- General notes:
- Water hazard class 1 (Assessment by list): slightly hazardous for water
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

#### 13 Disposal considerations

- · Waste treatment methods
- Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. (Contd. on page 6)

USA

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Safety Data Sheet acc. to OSHA HCS

Printing date 08/12/2014

Reviewed on 02/17/2014

Trade name: Calcium Chloride 4-8 Mesh Dessicant Grade, Anhydrous

(Contd. of page 5)

· Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number		
DOT, ADN, IMDG, IATA	Not Applicable	
UN proper shipping name DOT, ADN, IMDG, IATA	Not Applicable	
Transport hazard class(es)		
DOT, IMDG		
Class	Not Applicable	
Label		
ADN/R Class:	Not Applicable	
Packing group		
DOT, IMDG, IATA	Not Applicable	
Environmental hazards:		
Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex 1	II of	
MARPOL73/78 and the IBC Code	Not applicable.	

# 15 Regulatory information

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

- Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is listed.
- Proposition 65
- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 7)

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USA

# Safety Data Sheet acc. to OSHA HCS

Printing date 08/12/2014

Reviewed on 02/17/2014

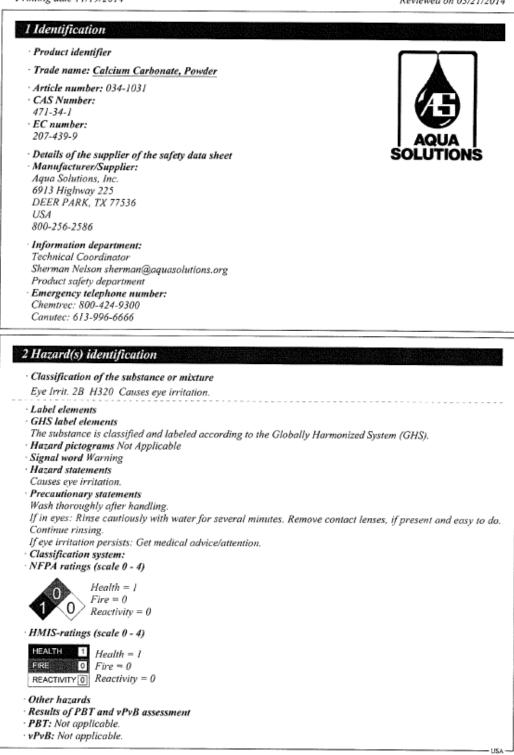
Trade name: Calcium Chloride 4-8 Mesh Dessicant Grade, Anhydrous (Contd. of page 6) · Hazard pictograms · Signal word Warning Hazard statements Causes serious eye irritation. Precautionary statements Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. · Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. · Department issuing MSDS: Environment protection department. · Contact: Mr. Nelson Date of preparation / last revision Creation date for SDS 03-21-2014 STN 08/12/2014/- Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

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Printing date 11/19/2014

Reviewed on 03/21/2014



(Contd. on page 2)

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## Safety Data Sheet acc. to OSHA HCS

Printing date 11/19/2014

Trade name: Calcium Carbonate, Powder

Reviewed on 03/21/2014

(Contd. of page 1)

#### 3 Composition/information on ingredients

· Chemical characterization: Substances

CAS No. Description

471-34-1 Calcium Carbonate

Identification number(s)

EC number: 207-439-9

# 4 First-aid measures

Description of first aid measures

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
- No further relevant information available

#### 5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

## 6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

## 7 Handling and storage

- Precautions for safe handling No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions; None.
- Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

(Contd. on page 3)

Printing date 11/19/2014

Decomposition temperature:

· Auto igniting:

Danger of explosion:

Explosion limits: Lower:

Upper:

Reviewed on 03/21/2014

ade name: Calcium Carbonate,	-0x4er
	(Contd. of page
· Control parameters	
· Components with limit values	hat require monitoring at the workplace:
471-34-1 Calcium Carbonate	
PEL Long-term value: 15* 5** *total dust **respirable fi	
REL Long-term value: 10* 5* *total dust **respirable fi	
TLV TLV withdrawn	
Additional information: The li	ts that were valid during the creation were used as basis.
Due to missing tests no recomm the chemical mixture. Selection of the glove mater degradation • Material of gloves The selection of the suitable glo and varies from manufacturer to • Penetration time of glove mate	
Physical and chemical pro Information on basic physical General Information	
· Appearance:	
Form:	Powder, Granules or Chips
Color:	White
Odor:	Odorless
Odour threshold:	Not determined.
• pH-value (50 g/l) at 20 °C (68 °	F): 9.5
<ul> <li>Change in condition Melting point/Melting range: Boiling point/Boiling range:</li> </ul>	800 °C (1472 °F) Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Ignition temperature:	

Not determined.

Not determined.

Not determined.

Not determined.

Product does not present an explosion hazard.

(Contd. on page 4)

USA

Printing date 11/19/2014

Trade name: Calcium Carbonate, Powder

#### Reviewed on 03/21/2014

		(Contd. of page 3
Vapor pressure at 20 °C (68 °F):	0 hPa	
Density at 20 °C (68 °F):	2.7 g/cm³ (22.532 lbs/gal)	
Bulk density at 20 °C (68 °F):	200-300 kg/m <sup>s</sup>	
Relative density	Not determined.	
Vapour density	Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with		
Water at 20 °C (68 °F):	0.013 g/l	
Partition coefficient (n-octanol/wate	r): Not determined.	
Viscosity:	· · · · · · · · · · · · · · · · · · ·	
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
Other information	No further relevant information available.	

# 10 Stability and reactivity

- Reactivity
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

# 11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

· LD/LC50 values that are relevant for classification:

- Oral LD50 6450 mg/kg (rat)
- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

## 12 Ecological information

#### Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- Bioaccumulative potential No further relevant information available.
  - Mobility in soil No further relevant information available.
  - Additional ecological information:
  - General notes: Generally not hazardous for water
  - Results of PBT and vPvB assessment
  - PBT: Not applicable.

(Contd. on page 5)

Printing date 11/19/2014

#### Reviewed on 03/21/2014

(Contd. of page 4)

Trade name: Calcium Carbonate, Powder

· vPvB: Not applicable.

· Other adverse effects No further relevant information available.

# 13 Disposal considerations

- · Waste treatment methods
- Recommendation:
- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

· UN-Number · DOT, ADN, IMDG, IATA	Not regulated
UN proper shipping name DOT, ADN, IMDG, IATA	Not regulated
Transport hazard class(es)	
DOT	Not applicable
Class	Not regulated
ADN/R Class:	Not regulated
Packing group	
DOT, IMDG, IATA	Not regulated
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.
Transport/Additional information:	
DOT	
Remarks:	Not regulated
IMDG	
Remarks:	Not regulated
IATA	
Remarks:	Not regulated

# 15 Regulatory information

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

- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.

(Contd. on page 6)

Page 6/6

## Safety Data Sheet acc. to OSHA HCS

#### Reviewed on 03/21/2014

## Trade name: Calcium Carbonate, Powder

(Contd. of page 5)

· Chemicals known to cause developmental toxicity: Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency) Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH) Substance is not listed.

• NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

· GHS label elements

Printing date 11/19/2014

- The substance is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms Not Applicable
- Signal word Warning

Hazard statements

Causes eye irritation.

- Precautionary statements
- Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing,

- If eye irritation persists: Get medical advice/attention.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

#### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Environment protection department.
- Contact: Mr. Nelson
   Date of preparation / last revision
   Creation date for SDS 10-02-2014. STN
   11/19/2014 / Abbreviations and acronyms:
   ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International
   Carriage of Dangerous Goods by Road)
   IMDG: International Maritime Code for Dangerous Goods
   DOT: US Department of Transport Association
   ATA: International Mir Transport Association
   ACGIH: American Conference of Governmental Industrial Hygienists
   EINECS: European Inventory of Existing Commercial Chemical Substances
   CAS: Chemical Abstracts Service (division of the American Chemical Society)
   NFPA: National Fire Protection Association (USA)
   HMIS: Hazardous Materials Identification System (USA)
   L250: Lethal concentration, 50 percent
   Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B



# SAFETY DATA SHEET

			Page 1 01 4	
SECTION 1: PRODUCT	AND COMPA	ANY IDENTIFICATION		
PRODUCT IDENTIFIER	CELAPOOL™			
CHEMICAL NAME	Diatomaceous Ear	th, Flux-Calcined		
CHEMICAL FAMILY	Silica			
MATERIAL USE	Filter Aid			
RESTRICTION ON USE	None Known	one Known		
MANUFACTURER	EP Minerals, LLC.	P Minerals, LLC., 9875 Gateway Dr., Reno, NV 89521		
TELEPHONE NO.	(775) 824 7600 (M	onday – Friday 8:00 am PST – 5:00 pm PS <sup>-</sup>	Γ)	
EMERGENCY TELEPHONE NO.	(775) 824 7600 (M	onday – Friday 8:00 am PST – 5:00 pm PS	Γ)	
SDS DATE OF PREPARATION	January 31, 2014			
SECTION 2: HAZARDS	IDENTIFICAT	ΓΙΟΝ		
OSHA GHS HAZARD CLASSIFICATION	Carcinogen Catego Specific Target Org	ory 1A gan Toxicity, Repeated Exposure Category	1	
HAZARDS NOT OTHERWISE CLASSIFIED	None			
LABEL ELEMENTS	DANGER May cause cancer by inhalation. Causes damage to lungs through prolonged or repeated exposure. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wear eye protection. If exposed or concerned: Get medical advice. Dispose of contents in accordance with local, state and federal regulations.			
SECTION 3: COMPOSI	rion / Infor	MATION ON INGREDIENTS	,	
INGREDIENT IDENTIFIC	ATION	APPROXIMATE CONCENTRATION (%)	C.A.S. NUMBERS	
Diatomaceous Earth, Flux-Calcined (k (contains 35-50% Crystalline Silica - C		100%	68855-54-9 14464-46-1	
SECTION 4: FIRST AID	MEASURES			
EYE	Flush eyes with ge	nerous quantities of water or eye rinse solut	tion. Consult physician if irritation persists.	
SKIN	Use moisture renewing lotions if dryness occurs.			
INGESTION	Drink generous amounts of water to reduce bulk and drying effects.			
INHALATION	Remove to fresh air. Blow nose to evacuate dust.			
Most important symptoms/effects, acute and delayed	throat and upper re	Dust may cause abrasive irritation to eyes. Prolonged skin contact may cause dryness. Dust may cause nose, throat and upper respiratory tract irritation. Prolonged inhalation of respirable dust containing silica may cause a progressive lung disease, silicosis and lung cancer. See Section 11 for additional information.		
Indication of immediate medical attention and special treatment, if necessary	Immediate medical	attention is not normally required. If dust irr	ritates the eyes, seek medical attention.	

MATERIAL NAME	CELAPO	OL™			Page 2 of 4	
SECTION 5: FIRE FIGHT	ING MI	EASURES				
EXTINGUISHING MEDIA	Not applic	cable, the material is not c	ombustible.			
SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	Not applic	lot applicable, the material is not combustible.				
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS	Not applic	ot applicable, the material is not combustible.				
SECTION 6: ACCIDENT	AL REL	EASE MEASUR	ES			
PERSONAL PRECAUTIONS		present, use respirator fitte eathe dust.	ed with particulate fil	ter as specified in Section 8. Protect	ct eyes with goggles.	
ENVIRONMENTAL PRECAUTIONS	This mate	erial is not a significant en	vironmental concern			
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	Vacuum o	clean spillage or wet swee	p. Avoid creating ai	rborne dust. Place in a container for	r use or disposal.	
<b>SECTION 7: HANDLING</b>	AND S	TORAGE				
PRECAUTIONS FOR SAFE HANDLING		dust generation. Avoid co all label precautions and v		o not breathe dust. Repair or dispose	e of broken bags.	
CONDITIONS FOR SAFE STORAGE		Store in a dry place to maintain packaging integrity and product quality. Do not store near hydrofluoric acid or concentrated caustic solutions.				
<b>SECTION 8: EXPOSURE</b>		ROLS / PERSON	NAL PROTEC	TION		
EXPOSURE GUIDELINES:						
Component		OSHA PEL	ACGIH TLV	MSHA PEL	NIOSH REL	
Diatomaceous Earth, Flux-Calcined (kieselguhr)		5 mg/m <sup>3</sup> respirable dust 15 mg/m <sup>3</sup> total dust	None Established	5 mg/m <sup>3</sup> respirable dust 15 mg/m <sup>3</sup> total dust	None Established	
Crystalline Silica (Cristobalite)		<u>1</u> x <u>30 mg/m<sup>3</sup></u> 2 % SiO <sub>2</sub> +2 total dust	0.025 mg/ m <sup>3</sup> Respirable dust	$\frac{1}{2} \times \frac{30 \text{ mg/m}^3}{\% \text{ SiO}_2+2}$ total dust	0.05 mg/ m <sup>3</sup> Respirable dust	
		$\frac{1}{2} \times \frac{10 \text{ mg/m}^3}{\% \text{ SiO}_2+2}$ Respirable dust		1_x <u>10 mg/m³</u> 2 % SiO₂+2 Respirable dust		
ENGINEERING CONTROLS				within recommended exposure limits s for design of ventilation systems.	s. Refer to ACGIH	
PERSONAL PROTECTIVE EQUIPMENT:						
EYE / FACE PROTECTION	Goggles to protect from dust					
SKIN PROTECTION	No specia	al equipment is needed.				
RESPIRATORY PROTECTION	Respirators fitted with filters certified to standard 42CFR84 under series N95 should be worn when dust is present. If the dust concentration is less than ten (10) times the Permissible Exposure Limit (PEL) use a quarter or half-mask respirator with a N95 dust filter or a single use dust mask rated N95. If dust concentration is greater than ten (10) times and less than fifty (50) times the PEL, a full-face piece respirator fitted with replaceable N95 filters is recommended. If dust concentration is greater than fifty (50) and less than two hundred (200) times the PEL use a power air-purifying (positive pressure) respirator with a replaceable N95 filter. If dust concentration is greater than two hundred (200) times the PEL use a type C, supplied air respirator (continuous flow, positive pressure), with full face piece, hood or helmet.					
GENERAL HYGIENE	Avoid bre	athing dust. Avoid contac	t with eyes. Wash	hands after handling and before eat	ting or drinking.	

	Ι			I
MATERIAL NAME	CELAPOOL™			Page 3 of 4
SECTION 9: PHYSICAL	AND CHEMICAL PRO	PERTIES		
APPEARANCE, COLOR	Light pink to white powder	ODOR	Odorl	ess
PHYSICAL STATE	Solid	ODOR THRESHOLD	Not app	licable
VAPOR PRESSURE	Not applicable	VAPOR DENSITY	Not app	licable
BOILING POINT	Not applicable	MELTING POINT	> 130	0° C
FLASH POINT	Not applicable	pH (10% SUSPENSION)	10	)
FLAMMABILITY LIMITS	Not applicable	EVAPORATION RATE	Not app	licable
DECOMPOSITION TEMPERATURE	> 1300° C	SPEC. GRAVITY / RELATIVE DENSITY	2.3	3
AUTOIGNITION TEMPERATURE	Not applicable	PARTITION COEFFICIENT – n- OCTANOL/WATER	Not app	licable
FLAMMABILITY (solid/gas)	Not applicable	SOLUBILITY - WATER	< 19	%
		VISCOSITY	Not app	licable
SECTION 10: STABILIT	Y AND REACTIVITY			
REACTIVITY	Material is not reactive.			
CHEMICAL STABILITY	Material is stable.			
POSSIBILITY OF HAZARDOUS REACTIONS	Material is not reactive under normal conditions of handling unless mixed with incompatible substances below.			
CONDITIONS TO AVOID	Not applicable			
INCOMPATIBLE MATERIALS	Hydrofluoric acid and concentrated caustic solutions may react violently with the product.			
HAZARDOUS DECOMPOSITION PRODUCTS	Not applicable			
SECTION 11: TOXICOL	OGICAL INFORMATIO	Ν		
POTENTIAL HEALTH EFFECTS				
Likely Routes of Exposure	See below			
EYE	May cause irritation (tear formation and redness) if dust gets in eyes.			
SKIN	Not absorbed by the skin, but may cause dryness if prolonged exposure.			
INGESTION	Ingestion of small quantities is not considered harmful, but may cause irritation of the mouth, throat and stomach.			
INHALATION	Acute inhalation can cause dryness of the nasal passage and lung congestion, coughing and general throat irritation. Acute inhalation of high concentrations of respirable crystalline silica may cause acute silicosis.			
CHRONIC EFFECTS		silica. Respirable crystalline silica may c periods. Symptoms of silicosis include v		
CARCINOGENICITY	Flux-calcined diatomaceous earth (Kieselguhr) is composed of amorphous and crystalline silica. Respirable crystalline silica (cristobalite) is classified by IARC and NTP as a known human carcinogen. Crystalline silica is only known to cause cancer when inhaled in a respirable form. It is not known to cause cancer by any other route of exposure.			
NTP	Respirable crystalline silica (crist	obalite) is classified as a known human	carcinogen.	
IARC	Respirable crystalline silica (crist	obalite) is classified as a known human	carcinogen.	
NUMERICAL MEASURES OF TOXICITY	No data available			
CORROSIVENESS, SENSITIZATION, IRRITANCY	Not applicable			

MATERIAL NAME	CELAPOOL <sup>™</sup> Page 4 of 4		
REPRODUCTIVE TOXICITY	Not available		
TERATOGENICITY, MUTAGENICITY	Not available		
SECTION 12: ECOL	OGICAL INFORMATION		
ECOTOXICITY:	Diatomaceous earth products have shown some efficacy as a natural insecticide, but otherwise have no demonstrated toxicity in regards to aquatic or terrestrial life.		
PERSISTENCE AND DEGRADABILITY	Non-biodegradable, inert.		
BIOACCUMULATIVE POTENT	IAL Little potential for bioaccumulation		
MOBILITY IN SOIL	No mobility		
OTHER ADVERSE EFFECTS	None known		
SECTION 13: DISPO	SAL CONSIDERATIONS		
WASTE DISPOSAL	If this material as supplied becomes a waste, use solid waste disposal common to landfill type operations or in slurry to sumps. Not considered a hazardous waste under RCRA (40CFR Part 261).		
PACKAGING DISPOSAL	Dispose of in accordance with applicable laws and regulations, typically solid waste disposal common to landfill type operations.		
SECTION 14: TRANS	SPORT INFORMATION		
BASIC SHIPPING INFORMATI	<b>ON</b> DOT shipping classification 55 (no restrictions). Technical name is "Diatomaceous Earth".		
ADDITIONAL INFORMATION	No special requirements or placarding necessary.		
<b>SECTION 15: REGU</b>	LATORY INFORMATION		
U.S. FEDERAL:			
TSCA	Diatomaceous Earth and Cristobalite appear on the EPA TSCA inventory list.		
CERCLA	Diatomaceous Earth is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR 302.		
SARA TITLE III	Not listed.		
California Proposition 65:	This product contains crystalline silica, a chemical known to the State of California to cause cancer.		
INTERNATIONAL:			
WHMIS Classification	Class D-2-A		
WHMIS Ingredient Disclosure List	Silica, crystalline, cristobalite		
<b>SECTION 16: OTHE</b>	R INFORMATION		
	Image: Second state of the se		
ORIGINAL ISSUE DATE	November 18, 1985		
REVISION DATE	April 21, 2015		
REVISION NO.	12		

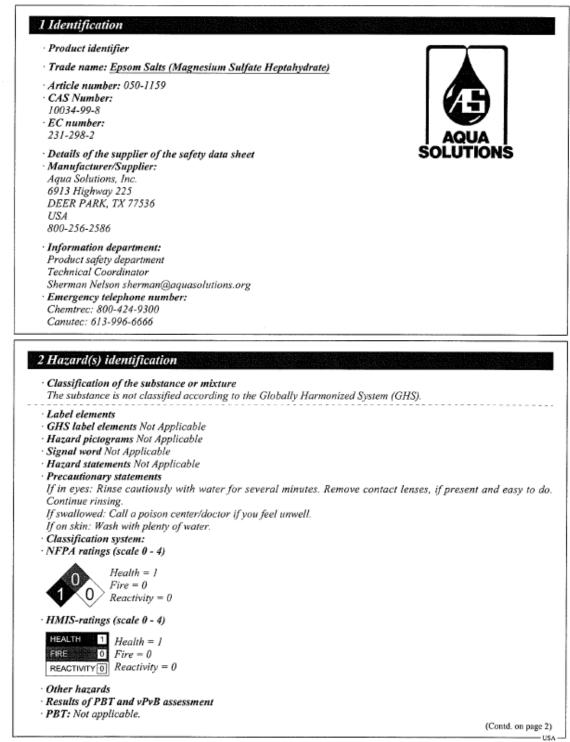
**Disclaimer:** As of the date of the preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state laws. No warranty, representation or guaranty of any kind, express or implied, is hereby provided or intended with respect to the completeness of the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by the purchase, resale, use or exposure to our product. Customer users of silica must comply with all applicable health and safety laws, regulations and orders, including OSHA Hazardous Communication Standard.

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Safety Data Sheet acc. to OSHA HCS

Printing date 11/13/2014

Reviewed on 03/26/2014



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# Safety Data Sheet acc. to OSHA HCS

Printing date 11/13/2014

Reviewed on 03/26/2014

(Contd. of page 1)

#### Trade name: Epsom Salts (Magnesium Sulfate Heptahydrate)

vPvB: Not applicable.

## 3 Composition/information on ingredients

- · Chemical characterization: Substances
- CAS No. Description
- 10034-99-8 Magnesium Sulfate Heptahydrate
- Identification number(s)
   EC number: 231-298-2
- EC number: 231-298-2

# 4 First-aid measures

Description of first aid measures

- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

## 5 Fire-fighting measures

#### Extinguishing media

- Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.

· Advice for firefighters

Protective equipment: No special measures required.

#### 6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

## 7 Handling and storage

- Precautions for safe handling No special measures required.
   Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.

(Contd. on page 3)

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# Safety Data Sheet acc. to OSHA HCS

#### Printing date 11/13/2014

Reviewed on 03/26/2014

(Contd. of page 2)

#### Trade name: Epsom Salts (Magnesium Sulfate Heptahydrate)

· Further information about storage conditions: None.

· Specific end use(s) No further relevant information available.

## 8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace: Not required.

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

- Personal protective equipment:
- General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Not required.

# 9 Physical and chemical properties

Appearance:		
Form:	Crystalline	
Color:	White	
Odor:	Odorless	
Odour threshold:	Not determined.	
pH-value (50 g/l) at 25 °C (77 °F):	5 - 8	
Change in condition		
Melting point/Melting range:	1124 °C (2055 °F)	
<b>Boiling point/Boiling range:</b>	Undetermined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Product is not flammable.	
Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	
Danger of explosion:	Product does not present an explosion hazard.	

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# Safety Data Sheet acc. to OSHA HCS

Printing date 11/13/2014

#### Reviewed on 03/26/2014

## Trade name: Epsom Salts (Magnesium Sulfate Heptahydrate)

		(Contd. of page
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not applicable.	
Density at 20 °C (68 °F):	1.67 g/cm <sup>3</sup> (13.936 lbs/gal)	
Relative density	Not determined.	
Vapour density	Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with		
Water at 20 °C (68 °F):	246 g/l	
Partition coefficient (n-octanol/w	ater): Not determined.	
Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
Other information	No further relevant information available.	

# 10 Stability and reactivity

Reactivity

- Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

# 11 Toxicological information

Information on toxicological effects

Oral	LD50	not available mg/kg (rat)
Dermal	LD50	not available mg/kg (rat)
Inhalative	LC50/4 h	not available mg/l (rat)
Irritation of skin	Skin Corrosion/Irritation	not available (rat)
Irritation of eyes	Eye damage/eye irritation	not available (rabbit)
	Germ cell mutagenicity	not available (rat)
Additional toxico	rritant effect. ritating effect. sensitizing effects known. <b>vlogical information:</b>	ications, the product does not have any harmful effects according

The substance is not subject to classification.

(Contd. on page 5)

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# Safety Data Sheet acc. to OSHA HCS

Printing date 11/13/2014

Reviewed on 03/26/2014

#### Trade name: Epsom Salts (Magnesium Sulfate Heptahydrate)

(Contd. of page 4)

Carcinogenic categories

- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

# 12 Ecological information

Toxicity

- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:

General notes:

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

#### 13 Disposal considerations

· Waste treatment methods

· Recommendation: Smaller quantities can be disposed of with household waste.

· Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

UN-Number DOT, ADN, IMDG, IATA	Not regulated	
UN proper shipping name	· · · · · · · · · · · · · · · · · · ·	
DOT, ADN, IATA	Not regulated	
IMDG	Not Regulated	
		1
Transport hazard class(es)		
DOT, ADN, IMDG, IATA		
Class	Not regulated	
Packing group		
DOT, IMDG, IATA	Not regulated	
	Norregarated	
Environmental hazards:		
Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex	II of	
MARPOL73/78 and the IBC Code	Not applicable.	

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# Safety Data Sheet acc. to OSHA HCS

Printing date 11/13/2014

Reviewed on 03/26/2014

#### Trade name: Epsom Salts (Magnesium Sulfate Heptahydrate)

		(Contd. of page
· Transport/Additional information:		
· DOT · Remarks:	Not regulated	
· IMDG · Remarks:	Not regulated	
· IATA · Remarks:	Not regulated	
· UN "Model Regulation":	Not regulated	

# 15 Regulatory information

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

- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is listed.
- Proposition 65
- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.
- Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- ·NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- GHS label elements Not Applicable
- Hazard pictograms Not Applicable
- Signal word Not Applicable
- Hazard statements Not Applicable
- Precautionary statements

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- If swallowed: Call a poison center/doctor if you feel unwell.
- If on skin: Wash with plenty of water.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

- Contact: Mr. Nelson
- Date of preparation / last revision
- Creation date for SDS 08-06-2014. STN
- 11/13/2014/-

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

(Contd. on page 7)

USA

<sup>·</sup> Abbreviations and acronyms:

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# Safety Data Sheet acc. to OSHA HCS

Printing date 11/13/2014

Reviewed on 03/26/2014

#### Trade name: Epsom Salts (Magnesium Sulfate Heptahydrate)

(Contd. of page 6)

USA

DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) LCS0: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

Printing date 11/17/2014

Reviewed on 11/17/2014

#### **1** Identification

- · Product identifier
- · Trade name: Kosher Salt
- Article number: 191-1117
- CAS Number: 7647-14-5
- EC number:
- 231-598-3
- Details of the supplier of the safety data sheet
  Manufacturer/Supplier: Aqua Solutions, Inc.
  6913 Highway 225 DEER PARK, TX 77536 USA
  800-256-2586
- Information department: Technical Coordinator Sherman Nelson sherman@aquasolutions.org Product safety department
- *Emergency telephone number: Chemtrec:* 800-424-9300 *Canutec:* 613-996-6666

#### 2 Hazard(s) identification

• *Classification of the substance or mixture The substance is not classified according to the Globally Harmonized System (GHS).* 

- · Label elements
- · GHS label elements Not Applicable
- · Hazard pictograms Not Applicable
- · Signal word Not Applicable
- Hazard statements Not Applicable
- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

(Contd. on page 2)

USA

Printing date 11/17/2014

Reviewed on 11/17/2014

Trade name: Kosher Salt

(Contd. of page 1)

#### 3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 7647-14-5 Sodium Chloride
- · Identification number(s)
- EC number: 231-598-3

#### 4 First-aid measures

- · Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

#### **5** Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

#### **6** Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- $\cdot$  Methods and material for containment and cleaning up:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

#### 7 Handling and storage

- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities

· Storage:

- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

(Contd. on page 3)

USA

Printing date 11/17/2014

Reviewed on 11/17/2014

Trade name: Kosher Salt

(Contd. of page 2)

• Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- · Breathing equipment: Not required.
- · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Goggles recommended during refilling.

#### 9 Physical and chemical properties · Information on basic physical and chemical properties · General Information · Appearance: Form: Crystalline Color: White Odorless · Odor: Not determined. · Odour threshold:

• <i>pH-value at 20</i> • <i>C</i> (68 • <i>F</i> ):	6-9	
• Change in condition Melting point/Melting range: Boiling point/Boiling range:	Information not °C 1413 °C (2575 °F)	
· Flash point:	Not applicable.	
· Flammability (solid, gaseous):	Not applicable.	
· Ignition temperature:		
Decomposition temperature:	Not determined.	
· Auto igniting:	Not determined.	
· Danger of explosion:	Product does not present an explosion hazard.	
		(Contd. on page

USA

*Printing date 11/17/2014* 

Reviewed on 11/17/2014

#### Trade name: Kosher Salt

		(Contd. of page
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapor pressure:	Not determined.	
• Density at 20 •C (68 •F):	2.165 g/cm <sup>3</sup> (18.067 lbs/gal)	
• Bulk density at 20 •C (68 •F):	800-1600 kg/m <sup>3</sup>	
· Relative density	Not determined.	
· Vapour density	Not determined.	
· Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water at 20 •C (68 •F):	358 g/l	
· Partition coefficient (n-octanol/wa	t <b>ter):</b> Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Organic solvents:	0.0 %	
• Other information	No further relevant information available.	

#### **10 Stability and reactivity**

· Reactivity

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- $\cdot$  Conditions to avoid No further relevant information available.
- *Incompatible materials:* No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

### **11** Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · LD/LC50 values that are relevant for classification:

#### 7647-14-5 Sodium Chloride

Oral LD50 3000 mg/kg (rat)

- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

(Contd. on page 5)

USA

Printing date 11/17/2014

Reviewed on 11/17/2014

Trade name: Kosher Salt

(Contd. of page 4)

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

#### **12 Ecological information**

· Toxicity

- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:

· General notes:

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

### **13 Disposal considerations**

· Waste treatment methods

· Recommendation: Smaller quantities can be disposed of with household waste.

· Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

· UN-Number		
· DOT, IMDG, IATA	Not regulated	
· UN proper shipping name		
· DOT, IATA	Not regulated	
·IMDG	Not Regulated	
· Transport hazard class(es)		
· DOT, IMDG, IATA		
· Class	Not regulated	
· Packing group		
· DOT, IMDG, IATA	Not regulated	
· Environmental hazards:		
· Marine pollutant:	No	

USA

Printing date 11/17/2014

Reviewed on 11/17/2014

Trade name: Kosher Salt

	(Contd. of )	page :
· Special precautions for user	Not applicable.	
• Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	
· Transport/Additional information:		
· DOT · Remarks:	Not regulated	
· IMDG · Remarks:	Not regulated	
· IATA · Remarks:	Not regulated	
· UN "Model Regulation":	Not regulated	

#### **15 Regulatory information**

· Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65

 $\cdot$  Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· GHS label elements Not Applicable

· Hazard pictograms Not Applicable

• Signal word Not Applicable

· Hazard statements Not Applicable

(Contd. on page 7)

USA

Printing date 11/17/2014

Reviewed on 11/17/2014

Trade name: Kosher Salt

(Contd. of page 6)

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Date of preparation / last revision 11/17/2014 / Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

<sup>·</sup> Contact: Mr. Nelson

12/09/2014



### 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier	
Product Identity	Isoamyl Benzoate for Synthesis
Alternate Names	Isoamyl Benzoate for Synthesis
1.2. Relevant identified uses of the substance or mix	xture and uses advised against
Intended use	Chemical for synthesis
Application Method	See Technical Data Sheet.
1.3. Details of the supplier of the safety data sheet	
Company Name	Thermco Products, Inc.
	10 Millpond Drive,
	Unit #10
	Lafayette, NJ 07848
Emergency	
Customer Service: Thermco Products, Inc.	973.300.9100

### 2. Hazard identification of the product

#### 2.1. Classification of the substance or mixture

Combustible Liquid;H227 Combustible Liquid.

#### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows. H227 Combustible liquid.

#### [Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking. P280 Wear protective gloves / eye protection / face protection.

#### [Response]:

No GHS response statements

#### [Storage]:

P403+235 Store in a well ventilated place. Keep cool.

#### [Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

12/09/2014



### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
ISOPENTYL BENZOATE CAS Number: 0000094-46-2	100	Not classified	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance. \*The full texts of the phrases are shown in Section 16.

### 4. First aid measures

#### 4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.
4.2. Most important sym	ptoms and effects, both acute and delayed
Overview	No specific symptom data available. See section 2 for further details.

### 5. Fire-fighting measures

#### 5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray. Do not use; water jet.

#### 5.2. Special hazards arising from the substance or mixture

Do not inhale vapors/aerosols. Ensure supply of fresh air in enclosed rooms.



Hazardous decomposition: No hazardous decomposition data available. Keep away from heat / sparks / open flames / hot surfaces - No smoking.

#### 5.3. Advice for fire-fighters

#### Special risks:

Combustible. Vapors heavier than air.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

#### Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus.

Do not allow run off water and contaminants from fire fighting to enter drains or water ways.

#### ERG Guide No.

### 6. Accidental release measures

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

Put on appropriate personal protective equipment (see section 8).

Do not inhale vapors/aerosols. Ensure supply of fresh air in enclosed rooms.

#### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

#### 6.3. Methods and material for containment and cleaning up

Do not inhale vapors/aerosols. Ensure supply of fresh air in enclosed rooms.

Take up with liquid-absorbent material (e.g. Chemizorb). Forward for disposal. Clean up affected area.

### 7. Handling and storage

#### 7.1. Precautions for safe handling

Store in accordance with the National Fire Protection Association's publication NFPA 30, Flammable and Combustible Liquids Code. 29 CFR 1910.106 applies to the handling, storage, and use of flammable and combustible liquids.

See section 2 for further details. - [Prevention]:

#### 7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Store in a cool dry area, away from heat, sparks and open flame. Keep containers sealed when not in use. Store out of direct sunlight.

Incompatible materials: Strong oxidizing agents

Tightly closed. At +15C to +25C.

12/09/2014



SDS Revision Date:

12/09/2014

See section 2 for further details. - [Storage]: 7.3. Specific end use(s)

No data available.

### 8. Exposure controls and personal protection

#### 8.1. Control parameters

	Exposure					
CAS No. Ingredient Source Value						
0000094-46-2	ISOPENTYL BENZOATE	OSHA	No Established Limit			
		ACGIH	No Established Limit			
		NIOSH	No Established Limit			
		Supplier	No Established Limit			

#### **Carcinogen Data**

CAS No.	Ingredient	Source	Value		
0000094-46-2	ISOPENTYL BENZOATE	OSHA	Select Carcinogen: No		
		NTP	NTP Known: No; Suspected: No		
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;		

#### 8.2. Exposure controls

Respiratory	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
Eyes	Protective safety glasses required
Skin	Butyl rubber gloves Layer thickness: 0.7 mm Breakthrough time: >240 min
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

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### 9. Physical and chemical properties

Appearance	Colorless Liquid
Odor	Almost Odorless
Odor threshold	Not Measured
рН	NA
Melting point / freezing point	NA
Initial boiling point and boiling range	260 C
Flash Point	89 C
Evaporation rate (Ether = 1)	NA
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: NA
	Upper Explosive Limit: NA
Vapor pressure (Pa)	NA
Vapor Density	NA
Density	0.99 g/cm3 (@20C)
Solubility in Water	Insoluble
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	NA
Decomposition temperature	NA
Viscosity (cSt)	NA
VOC %	NA
Log Pow	4.15 (experimental) (Lit.)
9.2. Other information	
No other relevant information.	

### 10. Stability and reactivity

#### 10.1. Reactivity

Hazardous Polymerization will not occur.

#### 10.2. Chemical stability

Stable under normal circumstances.

#### 10.3. Possibility of hazardous reactions

No data available.

#### 10.4. Conditions to avoid

Forms explosive mixtures with air on intense heating.



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10.5. Incompatible materials
Strong Oxidizing agents.
10.6. Hazardous decomposition products
No hazardous decomposition data available.

## 11. Toxicological information

#### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
ISOPENTYL BENZOATE - (94-46-2)	6330.00, Rat -	No data	No data	No data	No data
	Category: NA	available	available	available	available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)		Not Applicable
Acute toxicity (dermal)		Not Applicable
Acute toxicity (inhalation)		Not Applicable
Skin corrosion/irritation		Not Applicable
Serious eye damage/irritation		Not Applicable
Respiratory sensitization		Not Applicable
Skin sensitization		Not Applicable
Germ cell mutagenicity		Not Applicable
Carcinogenicity		Not Applicable
Reproductive toxicity		Not Applicable
STOT-single exposure		Not Applicable
STOT-repeated exposure		Not Applicable
Aspiration hazard		Not Applicable



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### **12. Ecological information**

#### 12.1. Toxicity

Do not allow product to enter water, wastewater or soil! See Section 3 for chemical specific data. Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish,	48 hr EC50 crustacea,	ErC50 algae,
	mg/l	mg/l	mg/l
ISOPENTYL BENZOATE - (94-46-2)	Not Available	Not Available	Not Available

#### 12.2. Persistence and degradability

There is no data available on the preparation itself.

#### 12.3. Bioaccumulative potential

An appreciable bioaccumulation potential is to be expected (log Po/w >3)

12.4. Mobility in soil

No data available.

#### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

#### 12.6. Other adverse effects

No data available.

### 13. Disposal considerations

#### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable DOT Label:	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable

14. Transport information

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14.5. Environmental hazardsIMDGMarine Pollutant: No14.6. Special precautions for userNo further information

## 15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.			
Toxic Substance Control Act ( TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.			
WHMIS Classification	B3			
US EPA Tier II Hazards	Fire: Yes			
	Sudden Release of Pressure: No			
	Reactive: No			
	Immediate (Acute): No			
	Delayed (Chronic): No			
EPCRA 311/312 Chemic (No Product Ingred				
EPCRA 302 Extremely I (No Product Ingred				
EPCRA 313 Toxic Chen (No Product Ingred				
Proposition 65 - Carcinogens (>0.0%): (No Product Ingredients Listed)				
Proposition 65 - Develo (No Product Ingred	pmental Toxins (>0.0%): lients Listed)			
Proposition 65 - Female (No Product Ingred				
Proposition 65 - Male R (No Product Ingred				
N.J. RTK Substances (> (No Product Ingred				
Penn RTK Substances (>1%) : (No Product Ingredients Listed)				



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### 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is: not applicable

# This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Disclaimer: This information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

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