



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Synthetic Fresh Water, Very Hard
830 ppm TDS as Fresh Water Ions, 280 - 320 mg/L Hardness as CaCO₃
Product Number 8665
Other Identifying Product Numbers 8665-1, 8665-32, 8665-5

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company
Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300
CHEMTREC (International) 1+ 703-527-3887

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

This product is not categorized as hazardous in any GHS hazard class.

2.2. GHS Label Elements

Pictograms: None Required.

Signal Word: None Required.

Hazard Statements: None Required.

Precautionary Statements: None Required.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

This product does not contain any ingredients of unknown acute toxicity.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	99.91
sodium hydrogen carbonate	Sodium Bicarbonate	144-55-8	< 0.1
calcium sulfate dihydrate	Calcium Sulfate Dihydrate	10101-41-4	< 0.1
magnesium sulfate	Magnesium Sulfate; Sulfuric acid, magnesium salt (1:1)	7487-88-9	< 0.1
Potassium chloride	Potassium Chloride; Hydrochloric acid, potassium salt	7447-40-7	< 0.1

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: May cause slight irritation.

Ingestion: Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause slight irritation.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Non-flammable, non-toxic, non-corrosive. Does not present any significant health hazards. Wash areas of contact with water. EYE CONTACT: May cause slight irritation. SKIN CONTACT: May cause slight irritation.

4.3. Immediate Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment and Precautions for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

6.2. Cleanup and Containment Methods and Materials

Absorb with suitable material and treat as normal refuse. Small amounts of the liquid may be flushed to the drain with excess water. Always dispose of in accordance with local regulations.

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Calcium Sulfate Dihydrate	10101-41-4	"15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)" As Gypsum [13397-24-5]; "15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)" As Calcium sulfate [7778-18-9]

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

No limits found.

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Calcium Sulfate Dihydrate	10101-41-4	10 mg/m ³ TWA (inhalable particulate matter, listed under Calcium sulfate)

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State: liquid

Color: Colorless

Odor: Data not available.

Odor Threshold: Data not available.

Melting/Freezing Point: 0.0°C

Boiling Point/Range: 100°C

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Flash Point: Not flammable

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

pH: Data not available.

Kinematic Viscosity: Data not available.

Solubility: miscible

Vapor Pressure: Data not available.

Evaporation Rate: Data not available.

Relative Density: 1.00

Relative Vapor Density: Data not available.

Particle Characteristics: Data not available.

Partition Coefficient n-octanol/water, log Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

None identified.

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Calcium Sulfate Dihydrate	10101-41-4	Oral LD50 Rat > 1581 mg/kg (no deaths occurred, Source: ECHA) As Calcium sulfate [7778-18-9]
Sodium Bicarbonate	144-55-8	Oral LD50 Rat 4220 mg/kg (Source: NLM_CIP)
Potassium Chloride	7447-40-7	Oral LD50 Rat 2600 mg/kg (Source: NLM_CIP)

Acute Toxicity - Dermal Exposure:

Not acutely toxic.

Acute Toxicity - Inhalation Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Calcium Sulfate Dihydrate	10101-41-4	Inhalation LC50 Rat > 3.26 mg/L 4 h (no deaths occurred, dust, Source: ECHA_API) As Calcium sulfate [7778-18-9]

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
No data found.		

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
No data found.		

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
No data found.		

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

11.3 Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Potassium Chloride	7447-40-7	Freshwater Algae	Acute	EC50 72 h <i>Desmodesmus subspicatus</i> 2500 mg/L (IUCLID)
Magnesium Sulfate	7487-88-9	Freshwater Algae	Acute	EC50 72 h <i>Desmodesmus subspicatus</i> 2700 mg/L (IUCLID)
Calcium Sulfate Dihydrate	10101-41-4	Freshwater Fish	Acute	"LC50 96 h <i>Lepomis macrochirus</i> 2980 mg/L [static] (EPA); LC50 96 h <i>Pimephales promelas</i> >1970 mg/L [static] (EPA)" As Calcium sulfate [7778-18-9]
Sodium Bicarbonate	144-55-8	Freshwater Fish	Acute	LC50 96 h <i>Lepomis macrochirus</i> 8250 - 9000 mg/L [static] (IUCLID)
Potassium Chloride	7447-40-7	Freshwater Fish	Acute	LC50 96 h <i>Lepomis macrochirus</i> 1060 mg/L [static] (EPA); LC50 96 h <i>Pimephales promelas</i> 750 - 1020 mg/L [static] (EPA)
Magnesium Sulfate	7487-88-9	Freshwater Fish	Acute	LC50 96 h <i>Pimephales promelas</i> 2610 - 3080 mg/L [static] (EPA)
Sodium Bicarbonate	144-55-8	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 2350 mg/L (IUCLID)
Potassium Chloride	7447-40-7	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 825 mg/L (IUCLID); EC50 48 h <i>Daphnia magna</i> 83 mg/L [Static] (EPA)
Magnesium Sulfate	7487-88-9	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 266.4 - 417.3 mg/L [Static] (EPA)

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT regulations.

14.2 Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG regulations.

SECTION 15: Regulatory Information

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chemical Name	CAS Number	RQ
No data found.		

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List
No data found.		

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Calcium Sulfate Dihydrate	10101-41-4	"Present" As Calcium sulfate [7778-18-9]

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Calcium Sulfate Dihydrate	10101-41-4	"Present" As Gypsum (Ca(SO ₄).2H ₂ O) [13397-24-5]; "Present" As Calcium sulfate [7778-18-9]

15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Calcium Sulfate Dihydrate	10101-41-4	"sn 4015" As Gypsum [13397-24-5]; "sn 4003" As Calcium sulfate [7778-18-9]

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Calcium Sulfate Dihydrate	10101-41-4	DSL	"Present" As Gypsum (Ca(SO ₄).2H ₂ O) [13397-24-5]; "Present" As Calcium sulfate [7778-18-9]
Sodium Bicarbonate	144-55-8	DSL	Present
Potassium Chloride	7447-40-7	DSL	Present
Magnesium Sulfate	7487-88-9	DSL	Present
Water	7732-18-5	DSL	Present

15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Calcium Sulfate Dihydrate	10101-41-4	"Present (ACTIVE)" As Sulfuric acid, calcium salt (1:1) [7778-18-9]
Sodium Bicarbonate	144-55-8	Present (ACTIVE)
Potassium Chloride	7447-40-7	Present (ACTIVE)
Magnesium Sulfate	7487-88-9	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Calcium Sulfate Dihydrate	10101-41-4	EINECS	"231-900-3" As Calcium sulfate [7778-18-9]
Sodium Bicarbonate	144-55-8	EINECS	205-633-8
Potassium Chloride	7447-40-7	EINECS	231-211-8
Magnesium Sulfate	7487-88-9	EINECS	231-298-2
Water	7732-18-5	EINECS	231-791-2

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Calcium Sulfate Dihydrate	10101-41-4	Present [11073]
Sodium Bicarbonate	144-55-8	Present [34140]
Potassium Chloride	7447-40-7	Present [24074]
Magnesium Sulfate	7487-88-9	Present [23165]
Water	7732-18-5	Present [32224]

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Calcium Sulfate Dihydrate	10101-41-4	Annex 1	"Present [KE-04614]" As Calcium sulfate [7778-18-9]
Sodium Bicarbonate	144-55-8	Annex 1	Present [KE-31360]
Potassium Chloride	7447-40-7	Annex 1	Present [KE-29086]
Magnesium Sulfate	7487-88-9	Annex 1	Present [KE-22752]
Water	7732-18-5	Annex 1	Present [KE-35400]

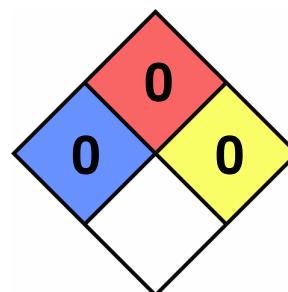
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Calcium Sulfate Dihydrate	10101-41-4	(1)-193 (not considered as a new chemical substance)
Sodium Bicarbonate	144-55-8	(1)-164
Potassium Chloride	7447-40-7	(1)-228
Magnesium Sulfate	7487-88-9	(1)-467
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 0
Flammability: 0
Reactivity 0
Special Hazard:





Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

16.2 Document Revision

Last Revision Date:

2026-05-07

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.