

# Safety Data Sheet

## Hard Water Mix, 1 G

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Hard Water Mix, 1 G  
**Recommended Use:** Science education applications  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**WARNING**



Harmful if swallowed. Causes serious eye irritation.

**GHS Classification:**

Serious Eye Damage/Eye Irritation Category 2, Acute Toxicity - Oral Category 4

**Acute Toxicity Dermal Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Dust/Mist Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Magnesium Sulfate, 7-hydrate	10034-99-8	60
Calcium Chloride, Dihydrate	10035-04-8	20
Sodium Bicarbonate	144-55-8	20

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** 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.  
**Ingestion:** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Calcium Oxides, Sodium Oxides, Carbon oxides, Metal Oxides, , Sulfur Oxides

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## Section 6 Spill or Leak Procedures

### Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Ventilate the contaminated area. Isolate area. Keep unnecessary personnel away. Avoid the generation of dusts during clean-up. Avoid creating and inhaling dust. Avoid contact with skin and eyes. Vacuum or sweep up material and place in a disposal container Pick up wash liquid with additional absorbent and place in a disposable container. Do not allow the spilled product to enter public drainage system or open waterways.

## Section 7 Handling and Storage

**Handling:** Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin and eyes. Do not breathe dust. Avoid creating and inhaling dust. Readily absorbs moisture from air.

**Storage:** Keep container tightly closed in a cool, well-ventilated place. Material is hygroscopic (absorbs moisture) and deliquescent (absorbs moisture to become solution).

**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Magnesium Sulfate, 7-hydrate	N/A	N/A	N/A	N/A
Calcium Chloride, Dihydrate	N/A	N/A	N/A	N/A
Sodium Bicarbonate	N/A	N/A	N/A	N/A

### Control Parameters

**Engineering Measures:** No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** No respiratory protection required under normal conditions of use.

**Respirator Type(s):** None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.

**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

**Gloves:** Butyl rubber, Neoprene, Nitrile

## Section 9 Physical Data

<b>Formula:</b> See Section 3	<b>Vapor Pressure:</b> No data available
<b>Molecular Weight:</b>	<b>Evaporation Rate (BuAc=1):</b> No data available
<b>Appearance:</b> Colorless to White White Powder	<b>Vapor Density (Air=1):</b> No data available
<b>Odor:</b> None	<b>Specific Gravity:</b> No data available
<b>Odor Threshold:</b> No data available	<b>Solubility in Water:</b> Appreciable (>10%)
<b>pH:</b> 5.0 - 8.0	<b>Log Pow (calculated):</b> No data available
<b>Melting Point:</b> 176 C	<b>Autoignition Temperature:</b> No data available
<b>Boiling Point:</b> No data available	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> No data available	<b>Viscosity:</b> No data available
<b>Flammable Limits in Air:</b> No data available	<b>Percent Volatile by Volume:</b> No data available

## Section 10 Reactivity Data

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**Reactivity:** No data available  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** Exposure to moisture  
**Incompatible Materials:** Ethoxyethynyl Alcohols, Strong acids, Zinc, Methyl Vinyl Ether, Boric Oxide  
**Hazardous Decomposition Products:** Sulfur Oxides, Metal Oxides, , Carbon oxides, Sodium Oxides, Calcium Oxides  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry** Ingestion., Inhalation, ingestion, eye or skin contact.  
**Symptoms (Acute):** Cardiovascular system, Anesthetic properties., Cyanosis, Paralysis, Bradycardia, Hypercalcemia (nausea, vomiting, pain, muscle twitches), Alkalosis, Diarrhea, Hypertension  
**Delayed Effects:** No data available

### Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Magnesium Sulfate 7-hydrate	10034-99-8			
Calcium Chloride, Dihydrate	10035-04-8	Oral LD50 Rabbit 1384 mg/kg		
Sodium Bicarbonate	144-55-8	Oral LD50 Rat 4220 mg/kg Oral LD50 Mouse 3360 mg/kg		

### Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Magnesium Sulfate 7-hydrate	10034-99-8	Not listed	Not listed	Not listed
Calcium Chloride, Dihydrate	10035-04-8	Not listed	Not listed	Not listed
Sodium Bicarbonate	144-55-8	Not listed	Not listed	Not listed

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** Central Nervous System, Cardiovascular system, Kidneys, Musculoskeletal system  
**Chronic:** No information available, Kidneys, Respiratory system, Cardiovascular system, Musculoskeletal system

## Section 12 Ecological Data

**Overview:** This material is not expected to be harmful to the ecology. Keep out of waterways.  
**Mobility:** No data  
**Persistence:** Dissolved into water  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Magnesium Sulfate, 7-hydrate	10034-99-8	
Calcium Chloride, Dihydrate	10035-04-8	
Sodium Bicarbonate	144-55-8	48 HR EC50 DAPHNIA MAGNA 2350 MG/L 120 HR EC50 NITZSCHIA LINEARIS 650 MG/L

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

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Waste Disposal Code(s):

Not Determined

## Section 14

## Transport Information

**Ground - DOT Proper Shipping Name:**  
Not regulated for transport by US DOT.

**Air - IATA Proper Shipping Name:**  
Not regulated for air transport by IATA.

## Section 15

## Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Magnesium Sulfate, 7-hydrate	10034-99-8	No	No	No	No	No
Calcium Chloride, Dihydrate	10035-04-8	No	No	No	No	No
Sodium Bicarbonate	144-55-8	No	No	No	No	No

## Section 16

## Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health