Section 1. Product and Company Identification

Product Name Sodium Hydrogen Sulfate Monohydrate
CAS Number 10034-88-5

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
(914) 654-6800 **(914) 654-6899**
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EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture
Classification (GHS-US)
Skin Corr. 1A H314

GHS Label Elements
Pictograms:

Signal word: DANGER

Hazard and precautionary statements
Hazard Statements (GHS-US)
H314 - Causes severe skin burns and eye damage
Precautionary Statements (GHS-US)
P260 - Do not breathe dust
P264 - Wash hands, forearms and face thoroughly after handling
P280 - Wear protective gloves, eye protection, protective clothing
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor
P321 - Specific treatment (see First aid measures on this label)
P363 - Wash contaminated clothing before reuse
P405 - Store locked up

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Other hazards: No additional information available
Unknown acute toxicity (GHS US): Not applicable

Section 3. Composition / Information on Ingredients

Common Name	Sodium Hydrogen Sulfate Monohydrate
Synonym(s)	Sodium Bisulfate Monohydrate; Monosodiumsulfate Monohydrate; Sulfuric Acid, Monosodium Salt
Formula	$NaHSO_4 \cdot H_2O$
CAS Number	10034-88-5

Section 4. First Aid Measures

Description of first-aid measures
First-aid measures general: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact: Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact: Rinse immediately with plenty of water for 15 minutes. Take victim to an ophthalmologist. Do not apply neutralizing agents.
First-aid measures after ingestion: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation: AFTER INHALATION OF DUST: ON CONTINUOUS EXPOSURE/CONTACT: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/injuries after skin contact: ON CONTINUOUS EXPOSURE/CONTACT: Tingling/irritation of the skin.
Symptoms/injuries after eye contact: Irritation of the eye tissue. Inflammation/damage of the eye tissue.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

Section 5. Firefighting Measures

Extinguishing media
Suitable extinguishing media: Adapt extinguishing media to the environment.
Unsuitable extinguishing media: No unsuitable extinguishing media known.

Special hazards arising from the substance or mixture
Fire hazard: DIRECT FIRE HAZARD. Non-combustible.
Explosion hazard: DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.
Reactivity: Violent exothermic reaction with water (moisture): release of corrosive products. Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapors (sulfur oxides).

Advice for firefighters
Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows.
Firefighting instructions: Dilute toxic gases with water spray.
Protection during firefighting: Heat/fire exposure: compressed air/oxygen apparatus.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures
For non-emergency personnel
Protective equipment: Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
Emergency procedures: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.
Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection.
Environmental precautions: Avoid release to the environment.

Methods and material for containment and cleaning up
For containment: Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.
Methods for cleaning up: Prevent dust cloud formation. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information: Dispose of materials or solid residues at an authorized site.

Reference to other sections
For further information refer to section 8: Exposure-controls/personal protection

Section 7. Handling and Storage

Precautions for safe handling
Precautions for safe handling: Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Avoid raising dust. Keep away from naked flames/heat. Reduce/avoid exposure and/or contact. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
Hygiene measures: Do not eat, drink, or smoke when using this product. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well-ventilated place. Keep cool.
Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.
Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: (strong) bases. alcohols. water/moisture.
Storage area: Store in a dry area. Meet the legal requirements.
Special rules on packaging: SPECIAL REQUIREMENTS: Closing. Watertight. Dry. Clean. Correctly labelled. Meet the legal requirements. Secure fragile packaging in solid containers.

Packaging materials: SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available

Section 8. Exposure Controls / Personal Protection

Control Parameters

Sodium Bisulfate Monohydrate (10034-88-5)		
ACGIH	Not applicable	
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ Total Dust 5 mg/m³ Respirable Dust

Exposure controls
Appropriate engineering controls: Ensure good ventilation of the work station.
Personal protective equipment: Dust production: dust mask with filter type P2. Gloves. Safety glasses.

Materials for protective clothing
GIVE EXCELLENT RESISTANCE: No data available.
GIVE GOOD RESISTANCE: No data available.
GIVE LESS RESISTANCE: No data available.
GIVE POOR RESISTANCE: No data available.

Hand protection: Gloves.
Eye protection: Safety glasses. In case of dust production: protective goggles.
Skin and body protection: Protective clothing.
Respiratory protection: Dust production: dust mask with filter type P2.
Environmental exposure controls: Avoid release to the environment.

Section 9. Physical and Chemical Properties

Physical state: Solid
Appearance: Crystalline solid.
Color: Colorless
Odor: No data available on odor
Odor threshold: No data available
pH: 1.4 0.1M Solution
Melting point: 59°C
Freezing point: Not applicable
Boiling point: No data available
Flash point: Not applicable
Relative evaporation rate (Butyl Acetate=1): No data available
Flammability (solid, gas): No data available
Explosion limits: Not applicable
Explosive properties: No data available
Oxidizing properties: No data available
Vapor pressure: No data available
Relative density: 2.1
Relative vapor density (20°C): No data available
Specific gravity/density: 2103 kg/m³
Molecular mass: 138.07 g/mol
Solubility: Soluble in water.
Water: 67 g/100ml
Log Pow: No data available
Log Kow: No data available
Auto-ignition temperature: Not applicable
Decomposition temperature: No data available
Viscosity: No data available
Viscosity, kinematic: Not applicable
Viscosity, dynamic: No data available

Other information
VOC Content: Not applicable
Other Properties: Hygroscopic. Substance has acid reaction

Section 10. Stability and Reactivity

Reactivity: Violent exothermic reaction with water (moisture): release of corrosive products. Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapors (sulfur oxides).
Chemical stability: Unstable on exposure to moisture.
Possibility of hazardous reactions: No dangerous reactions known under normal conditions of use.
Conditions to avoid: None under recommended storage and handling conditions (see section 7).
Incompatible materials: No additional information available
Hazardous decomposition products: No additional information available

Section 11. Toxicological Information

Information on toxicological effects
Acute toxicity: Not classified
Skin corrosion/irritation: Causes severe skin burns and eye damage.
pH: 1.4 0.1M Solution
Serious eye damage/irritation: Not classified
pH: 1.4 0.1M Solution
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified
Symptoms/injuries after inhalation: AFTER INHALATION OF DUST: ON CONTINUOUS EXPOSURE/CONTACT: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/injuries after skin contact: ON CONTINUOUS EXPOSURE/CONTACT: Tingling/irritation of the skin.
Symptoms/injuries after eye contact: Irritation of the eye tissue. Inflammation/damage of the eye tissue.

Section 12. Ecological Information

Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Ecology - air: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water: Mild water pollutant (surface water). Maximum concentration in drinking water: 250 mg/l (sulfate) (Directive 98/83/EC); 200 mg/l (sodium) (Directive 98/83/EC). Slightly harmful to invertebrates (Daphnia) (EC50 (48h): 100 - 1000 mg/l). pH shift. Insufficient data available on ecotoxicity.

Sodium Bisulfate Monohydrate (10034-88-5)	
EC50 Daphnia 1	190 mg/l (48 h; Daphnia magna; Anhydrous form)

Persistence and degradability
Sodium Bisulfate Monohydrate (10034-88-5)
Persistence and degradability Biodegradability: not applicable.
Biochemical oxygen demand (BOD): Not applicable
Chemical oxygen demand (COD): Not applicable
ThOD: Not applicable
BOD (% of ThOD): Not applicable

Bioaccumulative potential

Sodium Bisulfate Monohydrate (10034-88-5)	
Bioaccumulative potential	No bioaccumulation data available.

Mobility in soil: No additional information available

Other adverse effects
Effect on the global warming: No known ecological damage caused by this product.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Department of Transportation (DOT)
In accordance with DOT
Transport document description: UN3260 Corrosive solid, acidic, inorganic, N.O.S., 8, III
UN-No.(DOT): UN3260
Proper Shipping Name (DOT): Corrosive Solid, Acidic, Inorganic, N.O.S.
Hazard Classes (DOT): 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT): 8 - Corrosive
Packing group (DOT): III - Minor Danger
DOT Packaging Non Bulk (49 CFR 173.xxx): 213
DOT Packaging Bulk (49 CFR 173.xxx): 240
DOT Symbols: G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).

IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx): 154

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 25 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 100 kg
DOT Vessel Stowage Location: A - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel.

Additional information
Other information: No supplementary information available.

Transport by sea
UN-No. (IMDG): 3260
Proper Shipping Name (IMDG): Corrosive Solid, Acidic, Inorganic, N.O.S.
Class (IMDG): 8 - Corrosive substances
Packing group (IMDG): III - substances presenting low danger

Air transport
UN-No.(IATA): 3260
Proper Shipping Name (IATA): Corrosive Solid, Acidic, Inorganic, N.O.S.
Class (IATA): 8 - Corrosives
Packing group (IATA): III - Minor Danger

Section 15. Regulatory Information

US Federal Regulations
Sodium Bisulfate Monohydrate (10034-88-5): Not listed on the United States TSCA (Toxic Substances Control Act) inventory
Sodium Bisulfate Monohydrate (10034-88-5): Not listed on the United States TSCA (Toxic Substances Control Act) inventory

International regulations
CANADA: No additional information available
EU-Regulations: No additional information available
Classification according to Regulation (EC) No. 1272/2008 [CLP]: Eye Dam. 1 H318
Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]: Xi; R41

National Regulations
Sodium Bisulfate Monohydrate (10034-88-5)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Sodium Bisulfate Monohydrate (10034-88-5)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

HMIS Rating
Health: 3
Flammability: 0
Reactivity: 0
Personal Protection: E

NFPA Rating
Health: 3
Flammability: 0
Reactivity: 0

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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