



MATERIAL SAFETY DATA SHEET

Product Name: Ram pH Minus

4949 Greenhouse Road Houston, TX 77084-2205 281/856-7600 - 800/456-3459 - Fax 281/856-7015

I - PRODUCT IDENTIFICATION

Product: Sodium Bisulfate / pH Decreaser

Chemical Family:

Formula: NaHSO₄

CAS Number: 7681-38-1

Synonyms: Sodium acid sulfate, Nitre Cake, Sodium Hydrogen Sulfate

24 HR EMERGENCY TELEPHONE NUMBER

INFOTRAC (Transportation): (800)535-5053

II – COMPOSITION, INFORMATION ON INGREDIENTS

Chemical or Common Name:	Exposure Limits	
	OSHA PEL:	ACGIH TLV:
Sodium Bisulfate 93.2% [7681-38-1]	none established	none established
Sodium Sulfate 6.5%	none established	none established

III – HAZARDS IDENTIFICATION

Primary Route(s) of Entry:

Ingestion: (X)

Inhalation: (X)

Skin Contact: (X)

Eye Contact: (X)

Primary Health Hazards (Acute and Chronic):

Carcinogenicity Listings: Not Listed by NTP, IARC, or OSHA.

OSHA: ()

NTP: ()

IARC: ()

Signs & Symptoms of Exposure:

Ingestion: Irritant. May irritate or burn mouth, esophagus, or stomach.

Inhalation: Irritant. May irritate or burn nose, throat, and lungs. No exposure limits established.

Skin Contact: Moderate irritant. May cause burns if not flushed with water.

Eye Contact: Mild to severe irritant. May cause burns if not flushed with water

Medical Conditions Aggravated By Exposure:

IV – FIRST AID MEASURES

Emergency and First Aid Procedures:

Ingestion: Drink a large quantity of milk or water. Follow with milk of magnesia, beaten eggs, or vegetable oil. Do not induce vomiting. Contact a physician immediately.

Inhalation: Move to fresh air location. If irritation or discomfort persists, seek medical attention.

Skin Contact: Immediately flush with water for fifteen (15) minutes. If burn occurs, obtain medical help.

Eye Contact: Immediately flush with water for fifteen (15) minutes, lifting eyelids to thoroughly flush. Get prompt medical attention.

Notes to Physician:

Eyes: Natural watering of eyes will dissolve sodium bisulfate, forming a weak sulfuric acid solution, which may cause burns. Flush effected area thoroughly with water. Do not use chemical antidotes or neutralizing solutions.

Skin: Mild burns may occur if not thoroughly flushed previously.

Inhalation: Mild burning sensations may occur to mucous membranes and upper respiratory tract.

Ingestion: Body water content will react with sodium bisulfate to form a weak sulfuric acid solution, which may burn tissues in mouth, esophagus, or stomach. Solution should be diluted to reduce burning effect.

V – FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable, will not burn

Flammable Limits:

LEL: Not Applicable

UEL: Not Applicable

Extinguishing Media: water or dry chemical, as appropriate for combustibles in area.

Avoid water contact to material if possible.

Special Fire-fighting Procedures: If water is used to extinguish combustibles and product is dissolved in water forming sulfuric acid, wear acid protective equipment. If elevated temperatures (>806°F) are reached, self-contained breathing apparatus should be worn.

Unusual Fire and Explosion Hazards: Product readily dissolves in water to form a weak sulfuric acid solution. No gases or toxic fumes are emitted from this reaction, but precautions for exposure to sulfuric acid should be followed. At temperatures over 806°F, product will decompose, generating oxides of sulfur.

VI – ACCIDENTAL RELEASE MEASURES

Steps to Be Taken In Case Material Is Spilled or Released:

Small spills: Material is granular and can be swept up from surfaces.

Large spills: Pick-up as much material as possible with shovel or other tool.

Neutralize balance of spill with weak alkaline solution and wash down to sewer if federal, state, or local regulations permit.

VII – HANDLING AND STORAGE

Precautions to Be Taken in Handling and Storage:

Avoid contact with skin, eyes, or clothing. Do not store where exposed to moist conditions or near strong alkalis. Keep containers tightly closed. Wear all recommended protective equipment when handling.

VIII – EXPOSURE CONTROLS/ PERSONAL PROTECTION

Respiratory Protection: NIOSH or MSA certified dust mask should be worn while handling product to control exposure below nuisance dust limits of 10 mg/m³.

Ventilation:

Local Exhaust: Local ventilation to a dust collector is recommended.

Mechanical Exhaust:

Other Protective Clothing or Equipment: Wear acid resistant gloves such as rubber or neoprene, safety glasses, or goggles. Clothes should completely cover skin to avoid skin contact. Coats, coveralls, or aprons are recommended.

Work/ Hygienic Practices:

IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:

Vapor Pressure (mm Hg):

Vapor Density (Air=1):

Solubility in Water: 100%

Appearance and odor: Off-white, bead-like, granular dry material

Specific Gravity (H₂O=1):

Percent volatile by volume: Non-volatile

Melting Point: 350°F

Evaporation Rate:

Bulk Density: 83 lb/cu ft

X – STABILITY AND REACTIVITY

Stability: () Unstable () Stable

Conditions to Avoid: Store in dry area to avoid moisture contact. Temperatures over 806°F, product will decompose, generating oxides of sulfur.

Incompatibility: Avoid contact with strong alkaline materials such as caustic. Reacts with

water to form weak sulfuric acid solution. Do not mix with liquid chlorine bleach, ammonia cleansers, or similar products.

Hazardous Decomposition or By-Products: None, unless heated over 806°F, at which sulfur dioxide and sulfur trioxide are formed.

Hazardous Polymerization: May Occur Will Not Occur

XI - TOXICOLOGICAL INFORMATION

Acute Toxicity:

Target Organ Toxicity:

Reproductive and Development Toxicity:

Carcinogenicity:

Mutagenicity:

XII – ECOLOGICAL INFORMATION

Aquatic Toxicity:

Avian Toxicity: Animal Test Data: LD₅₀ Rat 2800 mg/kg

This material is neither corrosive nor destructive to the skin of New Zealand Rabbits.

Occasionally, a very slight rash may appear.

ENVIRONMENTAL HAZARDS (PR Notice 93-10)

This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water board or Regional Office of the EPA.

XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Comply with all Federal, State, and Local regulations.

XIV - TRANSPORTATION DATA

U.S. Department of Transportation - 49 CFR

Not classified as Hazardous

Proper Shipping Name: Nitre cake (Sodium bisulfate)

Hazard Class/Division Number:

ID Number:

Packing Group:
Label Required:
Placard Required:
Marine Pollutant:

International Maritime Organization - IMDG

Proper Shipping Name:
Hazard Class/Division Number:
ID Number:
Packing Group:
Label Required:
Placard Required:
Marine Pollutant:

XV - REGULATORY INFORMATION

SARA Title III: Section 312 Hazard category: Acute

NIOSH Registry No: Unknown

OSHA: Irritant

HMIS Rating:

Health: 1 Flammability: 0 Reactivity: 1 Protective Equipment: F

NFPA Rating:

Health: 1 Flammability: 0 Reactivity: 1 Special: None

Other Registries: ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2, BEILSTEIN, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPREVIEWS, CASREACT, CEN, CHEMINFORMRX, CHEMLIST, CBNB, CIN, CJACS, CSCHEM, CSNB, DETHERM, DIPPR, DSL, EINECS, EMBASE, GMELIN, HSDB, IFICDB, IFIPAT, IFIUDB, IPA, JANAF, MEDLINE, MRCK, MSDS OHS, MSDS-PEST, MSDS-SUM, PDLCOM, PIRA, PNI, PROMT, RTECS, TOXLINE, TOXLIT, TRCTHERMO, TSCA, USAN, VTB.

XVI - ADDITIONAL INFORMATION

This MSDS replaces the 03/31/2001 version. Any changes in information are as follows:
In Section I - 24 hr emergency telephone number

ALWAYS COMPLY WITH ALL APPLICABLE INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, USE AND DISPOSAL OF THIS CHEMICAL.

Due to the changing nature of regulatory requirements, the REGULATORY INFORMATION listed in Section XV of this document should NOT be considered all-inclusive or authoritative. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

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