SAFETY DATA SHEET

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1. PRODUCT IDENTIFIER & IDENTITY FOR THE CHEMICAL

Product Identifier: **SODIUM BISULFATE**
Other Means of Identification:
CAS No.: 7681-38-1
EC No: 231-665-7
Index No: 016-046-00-X
Molecular Weight: 120.1
Chemical Formula: NaHSO4
Chemical names: Sodium hydrogen sulfate; sodium acid sulfate; sulfuric acid, monosodium salt, monohydrate (AICS name). All spellings of "sulfate" may be replaced by "sulphate
Proper shipping name (ADG): Corrosive Solid, Acidic, Inorganic, N.O.S. (Sodium Bisulfate)
SUSMP name: Poison Schedule 5 (Sodium Bisulfate)
Other names or synonyms: DRY ACID;
Product Code: D0040
Recommended use of the chemical and restrictions on use: Pool acid. No restrictions.
Supplier Details

PERTH: Environex International Pty Ltd; 19 Motivation Drive Wangara WA 6065 EMAIL: sales@environex.net.au ABN: 371 5988 7117 FAX: (08) 9302 5000 TEL: (08) 9302 4000	BUNBURY: Environex International Pty Ltd; 18 Halifax Drive, Bunbury WA 6230
CONTACT POINT - Chemist - TELEPHONE (08) 9302 4000 EMERGENCY TELEPHONE NUMBER: A/H +61 407 994 198 or Toll Free 1800 999 196	

2. HAZARD IDENTIFICATION

Emergency overview: Corrosive. May be harmful if swallowed. Causes eye and skin burns. May cause severe respiratory and digestive tract irritation with possible burns.
Classification of the hazardous chemical
Classified as hazardous according to criteria of ASCC and classified as a dangerous good according to the ADG code.
Classification under the Globally Harmonised System of Classification and Labelling of Chemicals 4th Revised Edition:
Eye Dam. 1, H318
Label elements according to the National model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015)
Hazard pictograms:

Corrosion (GHS05)
Signal word: DANGER
Hazard statements:
H318 Causes serious eye damage

Precautionary statements:
P280 Wear protective gloves/ protective clothing/ eye protection/face protection.
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 POISON CENTER or doctor/physician.
Other hazards which do not result in classification

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance Name	*Concentration, %*	*Product Identifier*	*Hazard Classes and Hazard Categories*
Sodium hydrogensulphate	>92	CAS No. 7681-38-1 EC No. 231-665-7 Index No.: 016-046-00-X	Eye Dam. 1, H318

Ingredients either below cut off levels or not classified in "Implementing GHS – Annex 9"

Substance Name	*Concentration, %*	*Product Identifier*	*Hazard Classes and Hazard Categories*
Sodium sulfate	<6	CAS No.: 7757-82-6 EC No.: 231-820-9	Not classified
Water	<1	CAS No. 7732-18-5 EC No. 231-791-2	Not Listed

4. FIRST AID MEASURES

Description of necessary first aid measures
Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.
Skin: Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner, which limits further exposure. Get medical aid immediately
Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of water. Get medical aid immediately.
Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration. Get medical aid immediately
Symptoms caused by exposure: Burning and blistering
Medical Attention and Special Treatment: Treat symptomatically and supportively. Treat as for sulphuric acid burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Not combustible. Use agent most appropriate to extinguish surrounding fire.
Specific hazards arising from the chemical
Fire: May produce toxic fumes of sulphur oxides.
Explosion**:** Not an explosion hazard.
Hazchem Code: 2X
Special protective equipment and precautions for fire fighters

Advice for firefighters: Keep containers cool with water spray. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Containers may explode when heated

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use suitable equipment (including PPE) to prevent contamination of skin, eyes and personal clothing. Provide sufficient ventilation.

Emergency procedures, Evacuate the danger area or to consult an expert**.** Approach from upwind. Isolate the area. Wear self-contained breathing apparatus in confined spaces, in cases where the oxygen level is depleted, or in case of significant emissions. Prevent further leakage or spillage if safe to do so. Keep away from incompatible products.

Environmental precautions: If the product contaminates rivers and lakes or drains inform respective authorities. Do not flush into surface water or sanitary sewer system.

General Information: Use proper personal protective equipment as indicated in Section 8.

Methods and materials for containment and cleaning up

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Place in a closed container for disposal. Flush spill area with water.and neutralise with dilute acid.

7. HANDLING AND STORAGE

Precautions for safe handling: General: Eating, drinking and smoking in work areas is prohibited. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Use only in a well-ventilated area. Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale.

Conditions for safe storage, including any incompatibilities: Store according to Australian Standards AS 3780-2008 The storage and handling of corrosive substances. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area..

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters – exposure standards, biological monitoring

HSIS Airborne Exposure Limits: Non established

Appropriate engineering controls: Facilities storing or utilising this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits

Personal protective equipment (PPE)

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respiratory Protection (AS/NZS 1715/1716 Approved): Wear a full-face piece dust/mist respirator For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colourless crystals

Odour: Odourless
Odour threshold: Not available
pH: 1.4 (1M)
Melting point: 180ºC (58.5°C (monohydrate)>315°C (anhydrous) w some decomp)
Initial boiling point and boiling range: decomposes to Na2S2O7
Flash point: Not available
Evaporation rate: Not available
Flammability (solid, gas) : Not available
Vapour pressure: Not available
Vapour density: Not available
Specific Gravity: 2.435 (Bulk density: 1.4-1.5 kg/L)
Solubility: 280g/L at 25ºC. At 0ºC, 67g/100g water (50g / 100ml of anhydrous). At 100ºC, 100g / 100ml of anhydrous
Partition coefficient: n-octanol/water: Not available
Auto-ignition temperature: Not available
Decomposition temperature: Not available
Viscosity: Not available
% Volatiles by volume @ 21ºC: 0

10. STABILITY AND REACTIVITY

Reactivity: Will react with alkalis.
Chemical Stability: Stable under normal temperatures and pressures.
Possibility of Hazardous Reactions: Will not react or polymerise, releasing excess pressure or heat, or create other hazardous conditions**.**
Conditions to Avoid: Moisture, dusting and incompatibles.
Incompatible materials and possible hazardous reactions: Reacts with alkalis (bases), calcium hypochlorite and sodium carbonate. Corrosive (especially when hot) to many metals and alloys. Slowly liberates explosive hydrogen gas when reacting with stainless steel.
Hazardous Decomposition Products: Oxides of phosphorus, carbon and sulfur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Sodium bisulfate: LD50(oral,rat) = 2800mg/kg. LD50(intraperitoneal,mouse) = 193mg/kg.
Health Effects
Skin: Corrosive. Symptoms of redness, pain, and severe burn can occur.
Eye: Acidic irritant. Pain, tearing and redness can occur. Crystalline dust may also be abrasive. Solutions are acidic and splashes may cause eye damage.
Ingestion: Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhoea
Inhalation: Inhalation produces damaging effects on the mucous membranes and upper respiratory tract. Symptoms may include irritation of the nose and throat, and laboured breathing. May cause lung oedema, a medical emergency.
Chronic: Lung irritation, tracheal bronchitis, persistent coughing, and corrosion of teeth are possible effects from long term exposure to dust, mist or fumes from wet or moist sodium bisulfate.
Respiratory or skin sensitisation: Not sensitising
Germ cell mutagenicity: Anhydrous salt has been investigated as a mutagen
Carcinogenicity: Not an NTP or IARC carcinogen
Reproductive toxicity: Not available

Specific Target Organ Toxicity (STOT) – single exposure: Not available
Specific Target Organ Toxicity (STOT) – repeated exposure: Not available
Aspiration hazard: Not available
Information on Possible routes of exposure: Ingestion, Inhalation, Skin/ eye exposure.
Delayed Health Effects from Exposure: Not available
Interactive Effects: Not available
Mixtures of Chemicals:

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data
Persistence and degradability: Not available.
Bioaccumulative potential: Not available
Mobility in soil: Not available
Other adverse effects: None known

13. DISPOSAL CONSIDERATIONS

Disposal methods: Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an approved waste facility. State and local disposal regulations may differ from federal disposal regulations. Neutralise to pH 6-9 before disposal

Disposal of any contaminated packaging: Dispose of container and unused contents in accordance with federal, state and local requirements.

Effects of sewage disposal: No data

14. TRANSPORT INFORMATION

Australian DG Classification for Road and Rail: UN 3260; Shipping Name: Corrosive Solid, Acidic, Inorganic, N.O.S. (Sodium Bisulfate). Class 8; PG III

Hazchem Code: 2X

International (Water, I.M.O.): UN3260.Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (SODIUM BISULFATE). Hazard Class: 8; UN/NA: Packing Group: III

International (Air, I.C.A.O.): UN1821. Proper Shipping Name: SODIUM BISULPHATE, SOLID. Hazard Class: 8. UN/NA: Packing Group: III

Environmental hazards for Transport Purposes: Not a marine pollutant
Special precautions during transport: None

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Australian Inventory of Chemical Substances: Sulfuric acid, monosodium salt is listed in the AICS.

HSIS (Safe Work Australia) Labelling:. Xi Irritant; R41: Risk of serious eye damage. Sl/2 Keep locked up and out of the reach of children. S24: Avoid contact with skin. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice;

SUSMP Labelling: Poison Schedule 5**; FIRST AID INSTRUCTIONS**: For advice, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor (at once). If swallowed, do NOT induce vomiting. If in eyes, wash out immediately with water. If skin or hair contact occurs, remove contaminated clothing and flush skin and

hair with running water. **SAFETY DIRECTIONS**: Avoid contact with eyes. Avoid contact with skin. Avoid breathing dust.

16. OTHER INFORMATION
Date of preparation or review:
Key abbreviations or acronyms used:

The above information is accurate to the best of the knowledge available to us. However since data safety standards and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control we make no warranty, whether express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all current data relevant to their particular use.

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