



Company Details:

Waterwell Projects (PTY) LTD

Reg No. 2001/018862/07

Waterwell Projects (PTY) LTD

Unit 5 Megazone Park

Hertford Junction R512

Lanseria 1748

Tel: 010 446 8356 or 073 077 0973

Fax: 086 471 2504

Poison Centre: **0861 555 777**

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

a) Identification of the substance or preparation:

- 1.1. **Trade / Commercial Name:** Waterwell pH Reducer Dry (packed 3kg, 25kg)
1.2. **Chemical Name:** Sodium hydrogen sulphate
1.3. **Formula:** NaHSO₄
1.4. **Synonyms:** Sodium Bisulphate, Sodium acid sulphate, nitre cake, GBS
1.5. **Un No.** 3260
1.6. **CAS No.** 7681-38-1
1.7. **Hazchem code:** 2R

b) Information of Distributor :

Waterwell Projects (PTY) LTD
Unit 5 Megazone Park
Hertford Junction R512
Lanseria, 1748
Tel: 010 446 8356 or 073 077 0973
Fax: 086 471 2504

Alternate suppliers:

CJP Chemicals (Pty) Ltd
P. O. Box 1353
Cresta 2118
32 Tiger Moth ave
Aeroton 2190
Tel: 011 494 6700
Fax: 011 494-6701

2. COMPOSITION / INFORMATION ON INGREDIENTS

Material / Component	%	CAS No	Risk phrases
Sodium bisulfate	>90%	7681-38-1	R41; X1

3. HAZARDS IDENTIFICATION

Corrosive.

Strong irritant to tissue.

Highly irritating to skin, particularly in a humid state, and potentially causing serious damage to the eyes.

In water decomposes with the formation of sulphuric acid (Corrosive).

3.2 Health effects:

Eyes

Low concentrations of vapour or mist (10-35 ppm) can be immediately irritating, causing redness. (2) Concentrated vapour, mist or splashed liquid can cause severe irritation, burns and permanent blindness. (4).

Skin

Hydrochloric acid liquid can cause skin burns, and may produce keloid and retractile scarring (29*). Facial burns may result in serious and disfiguring scars. Frequent contact with the dilute acid may cause dermatitis (14*) and photosensitisation may result from industrial contact.

Ingestion

Hydrochloric acid solutions can cause corrosive burns to mouth, throat, oesophagus and stomach. Symptoms may include difficulty in swallowing, intense thirst, nausea, vomiting, diarrhoea and in severe cases, collapse and death. Small amounts of acid which enter the lungs during ingestion or vomiting (aspiration) can cause serious lung injury and death. **Inhalation**

The major effects of acute exposure to hydrogen chloride are usually limited to the upper respiratory tract and are severe enough to lead to prompt withdrawal (13*). Exposure to the gas causes cough, burning of the throat and choking feeling, inflammation and ulceration of the nose, throat and larynx (14*). Exposure to higher concentrations, as may occur if a worker is prevented from escaping, may cause laryngeal spasm, and oedema of the lungs and vocal cords (15*).

Prolonged or repeated exposure may cause dental discolouration and erosion (15* - 17*).

Pulmonary function changes in naïve but not chronically exposed workers suggests acclimatisation occurs (18*). Gastritis and chronic bronchitis have also been reported in exposed workers (19*).

In humans, exposure to 50 – 100 ppm for 1 hour is barely tolerable, 35 ppm for a short while causes throat irritation, and 10 ppm was tolerable (20*), although immediate irritation has been reported at concentrations over 5 ppm (21*). Bleeding nose and gums, ulceration of nasal and oral mucosa, and painful shaving due to tender facial skin was reported in workers exposed to mists from heated metal pickling solutions (22*).

In animal studies reported effects of exposure to high concentration of hydrogen chloride include damage to the lungs and blood vessels, lung collapse, and lesions of the liver and other organs (23*), coughing, wheezing, frothing, slowing of movement, increased respiratory rate, and death due to respiratory tract effects (24*). Repeated exposure to low concentrations of the gas (34 ppm) had no immediate toxic effects and produced no morphological changes (23*). Exposure to 100 ppm, 6 hours/day for 50 days caused slight unrest and irritation of the nose and eyes in several species (25*), while repeated exposure at higher concentrations caused weight loss (23*). Lesions in the nasal cavity of mice has also been reported (26*).

Inhalation of weak hydrochloric acid into the bronchi of rabbits caused inflammatory processes like those occurring in "flu or due to chemical weapons (27*). Differing responses to irritant gases such as hydrogen chloride between rodents and nonhuman primates suggest that the former may be an inadequate model for evaluating the toxicity of irritant gases to humans (28*).

3.3 ADDITIONAL MEDICAL INFORMATION

Carcinogenicity

No carcinogenic response was noted in inhalation experiments with rats (31*). Mortality rate from lung cancer was found to be significantly alleviated in workers exposed to sulphuric and hydrochloric acid mists during steel-pickling operations (32*).

4. FIRST AID MEASURES

4.1 Eyes: Do not use neutralizing agents. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. If redness or irritation persists, get prompt medical attention

4.2 Skin: In case of contact, immediately flush skin with plenty of water for at least 20 minutes. If skin irritation occurs, seek medical attention.

4.3 Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If irritation or discomfort persists, seek medical attention.

4.4 Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call medical doctor or poison control center immediately.

4.5 First Aid Comments: Consult a physician and/or the nearest Poison Control Centre for all exposures except minor instances of inhalation or skin contact.

5. FIRE FIGHTING MEASURES

Material non-combustible.

Co-ordinate firefighting measures to the surrounding areas but do not use water.

Products of de-composition –Sulphur dioxide, Sulphur trioxide

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Ensure suitable personal protection during removal of spillage.

Cordon off the area and deny entry.

Do not touch or walk through spilled material.

Environmental precautions

Do not allow product/runoff from fire to enter sewers, drains or watercourses.

Small Leak/Spill:

Keep all non-essential personnel away from the area. Never spray with water. Collect material in polyethylene or polypropylene containers. Dispose spilled material through a registered waste disposal company in an approved landfill. Flush spill area with water only when all visible traces have been removed.

Large Leak/Spill:

Do not flush large quantities down municipal sewers or storm water drains.

7. HANDLING AND STORAGE

7.1 HANDLING: Handling precautions: Minimize dust. Do not breathe dust. Avoid contact with skin, eyes and mucous membranes. Have eye bath immediately available at any location where eye contact can occur.

7.2 STORAGE: Keep container tightly closed and dry. Keep containers off wet floors. Examine regularly for any sign of package failure. No other special precautions appear necessary. Product may only be stored in polyethylene or polypropylene containers. Store away from oxidizing agents and strong alkalis.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Wear acid-resistant suits, breathing apparatus, gloves and goggles.

8.1 Engineering controls: Provide adequate ventilation, including appropriate local extraction, to ensure that the occupational exposure limit is not exceeded.

Mechanical ventilation (dilution and/or local exhaust) is recommended for all indoor situations. Ensure eye wash fountains and quick drench showers are provided within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odour: Dry (Anhydrous) crystalline solid spherical shape beads.
Odour: odourless
Solubility: Solubility: 28g/100ml water
pH of 20% solution: 1.0 –1.3
Melting Point: 177°C
Bulk Density: 1.4 –1.45 g/m³

10. STABILITY AND REACTIVITY

If in contact with water, the product will form into sulphurous acid, corrosive.
Reacts with oxidizing agents and strong alkalis.

Incompatible Materials: Acid solutions react with many metals forming hydrogen.

11. TOXICOLOGICAL INFORMATION

Acute effects: Oral LD50: 2490mg/Kg (Rats)
Irritant effects: Irritating to human tissue

12. ECOLOGICAL INFORMATION

Product will acidify water and should not be flushed to municipal sewers or storm water drains.
Toxic effect on fish and bacteria begins at pH <6.0.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, regional or national legislation.

Neutralise before disposing.

Dispose spilled material through a registered waste disposal company in an approved landfill.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME (PSN): Corrosive Solid, Acidic, Inorganic, N.O.S.
CLASS: 8 Corrosive
CAS No: 7681-38-1
UN Number: 3260
Packaging Group: III

REGULATORY INFORMATION

Users should ensure that they comply with any relevant local, regional or national legislation.
Regulated under the Hazardous Chemicals Regulation of the Occupational Health and Safety Act.

EEC Hazard Classification

Risk Phases: R41 Risk of serious damage to eyes

Safety Phases: S2 Keep out of 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.

16.FURTHER INFORMATION

No further information available.

The information herein is given in good faith and to the best of our knowledge at the current date. The accomplishment of the instructions herein does not exempt the user from following the legal and administrative regulations relative to product, environmental safety and hygiene, which are user's own responsibility. In case of mixture with other substances, ensure that other risks are not generated.

Date of Revision: 29 July 2019 (general revision)