

SAFETY DATA SHEET

PRODUCT NAME: Sodium Metabisulphite

Issue Date: October 22

IDENTIFICATION

Product Name: Sodium Metabisulphite
Other Names: Disodium pyrosulphite; "SBS powder", SMBS, "Food Additive 223", "disodium pyrosulphite", "pyrosulphurous acid, disodium salt", "sodium pyrosulphite", "disodium pyrosulphite", "sodium metabisulphite".
Product Code: ZSMETAB
Uses: Widely used as food preservative; as food additive 223. Amounts in foods are subject to regulation. Used as a reagent and as a source of sulphur dioxide.
Supplier: HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Hamilton
 Phone: 079744971 Email: info@hamchem.nz Web: www.hamchem.nz

- In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.
- In case of poisoning phone National Poisons Centre – 0800 764 766

HAZARD IDENTIFICATION



GHS Classifications

Acute Toxicity (Oral) – Category 4
 Skin Irritation – Category 2
 Serious Eye Damage – Category 1
 Respiratory Sensitisation – Category 1
 Skin Sensitisation – Category 1

Signal Word: DANGER

Hazard Statements:

H302 - Harmful if swallowed.
 H315 - Causes skin irritation.
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 - May cause an allergic skin reaction.
 H318 - Causes serious eye damage.

Prevention

P264 - Wash hands and exposed skin thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P280 – Wear protective gloves
 P280 – Wear eye/face protection
 P261 - Avoid breathing dust/vapours.
 P284 - In case of inadequate ventilation wear respiratory protection.
 P272 - Contaminated clothing should not be allowed out of the workplace.

Response

P301+P312 - IF SWALLOWED: Call a POISON CENTRE or Doctor if you feel unwell.
 P330 – Rinse mouth

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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 CENTRE or Doctor.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTRE or Doctor
Collect spillage.

Disposal

P501 - Dispose of contents/container to an approved waste facility in accordance with local regulations

COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion (%)
Sodium Metabisulphite	7681-57-4	> 95%

FIRST AID MEASURES

If swallowed: Do not induce vomiting. Rinse mouth thoroughly with water. Have victim drink 1-2 glasses of water. Call the Poison Centre for advice on 0800 764766, or a doctor.

If on skin: Remove contaminated clothing including footwear. Wash the affected area thoroughly with running water. If irritation persists or rash appears seek medical advice. Wash contaminated clothing before reuse.

If inhaled: Remove victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by a person trained in its use, preferably on a physician's advice. If shortness of breath or respiratory irritation persists seek medical attention. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped perform CPR (avoid mouth-to-mouth contact). Obtain medical attention immediately.

If in eyes: Wash out immediately with fresh running water for at least 15 minutes. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Obtain medical attention immediately. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Note to Physician: Treat symptomatically based on individual reactions of patient and judgement of doctor.
NOTE: In an emergency dial 111, for advice, contact a Poison Centre (0800-764-766).

FIRE FIGHTING MEASURES

Extinguishing media: Use extinguishing media suitable for surrounding area; water spray, dry chemical, foam or carbon dioxide.

Fire fighting: Alert Fire Brigade and tell them location and nature of hazard. Clear fire area of all non-emergency personnel. Stay upwind. Eliminate ignition sources. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. Use firefighting procedures suitable for surrounding area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.

Fire/explosion hazard: Non-combustible. Not considered to be a significant fire risk, however containers may burn. In a fire may decompose on heating and release toxic and corrosive fumes of Sulphur dioxide and sodium oxide.

Fire incompatibility: Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

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Personal Protective Equipment: Firefighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves). Consider a chemical splash suit. Limit exposure duration to 1 BA set 30 mins.

HazChem code: not applicable

ACCIDENTAL RELEASE MEASURES

Spill response: Avoid generating dust. Increase ventilation. Move upwind. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Prevent contact with the substance. Personnel involved in the clean-up should wear full protective clothing including respiratory protection. Stop leak if safe to do so. Use spark-proof tools and equipment. Use dry clean-up procedures. Sweep up or vacuum up (consider explosion-proof machines designed to be grounded during use). Collect in a labelled chemical waste container and seal for disposal. See section 13 of the SDS. Do NOT let product reach drains or waterways. If a significant amount does enter a waterway advise emergency services or your local waste authority. Wash spill area with plenty of water after removal of contaminant. Decontamination run-off should be prevented from entering drains and watercourses. After clean-up operations decontaminate and launder all protective clothing and equipment before storing and re-using.

HANDLING & STORAGE

Procedure for handling: Operators should be trained in procedures for safe use of this material. Use in a well-ventilated area. Avoid all personal contact, including inhalation. Wear protective clothing and a suitable respirator when risk of exposure occurs. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to contact humans, exposed food or food utensils. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Suitable container: Glass container. Polyethylene or polypropylene packaging. Check all packaging is clearly labelled and free from leaks.

Storage incompatibility: Incompatible with nitrates, nitrites, acids and oxidizing agents. Contact with acids produces toxic fumes. Keep dry as moist product oxidizes to Sodium Sulphate.

Storage requirements: Store in original packaging. Keep containers securely sealed to prevent product from moisture and humidity. Moist product oxidizes to Sodium Sulphate. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storing and handling recommendations.

EXPOSURE CONTROLS & PERSONAL PROTECTION
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Exposure standards: Worksafe NZ have not set a WES value for Sodium Metabisulphite. The exposure standard for dust not otherwise specified is 10mg/m³ for inspirable dust and 3mg/m³ for respirable dust.

Engineering controls: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Refer to 'A simple guide to local exhaust ventilation' found on the WorkSafe New Zealand website.

Personal protective equipment:

Personal respirators: For conditions of use where exposure to the product is possible and engineering controls are not feasible, a combination respirator (type E-P2 or B-P2) may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin protection: Wear impervious protective clothing, including chemical resistant boots, rubber gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Suitable gloves, resistant to chemicals and petroleum distillates should be selected based on penetration time, rates of diffusion and break through time.

Recommendations, suggestions or statements made in the bulletins are intended for the assistance of our customers. They are based upon our experience and judgement but must not be regarded as amounting to a legal warranty or as involving any liability on our part and must be read in conjunction with and subject to our Conditions of Sale which apply to goods supplied by us.

HamChem Ltd, 75 Ruffell Road, Hamilton, New Zealand. Phone: 07-974-4971 Email: info@hamchem.nz Web: www.hamchem.nz

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Refer to AS/NZS 2161.1:2000 Occupational Protective Gloves – Selection, use and maintenance; AS/NZS 2210.1:2010 for Safety footwear; AS/NZS 4501.1:2008 Occupational protective clothing – Guidelines on the selection, use, care and maintenance of protective clothing.

Eye protection: Use approved chemical safety goggles and a full face shield where splashing is possible. Refer to Personal eye protection Part 1: Eye and face protectors for occupational applications, Australian/New Zealand Standard: AS/NZS 1337.1:2010. Maintain eye wash fountain in work area.

Other: Ensure there is ready access to an emergency shower. Ensure that there is ready access to eye wash unit.

PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Light yellow or white crystalline powder
State:	Solid
Odour:	Of Sulphur dioxide
Molecular weight:	190.13
Melting Range (°C):	>120
Boiling Range (°C):	Not available
Solubility in water:	470 g/L (20°C)
pH:	3.0-5.5 (5% solution, 20°C)
Specific Gravity:	Not available
Bulk density:	1.2 g/cm ³ (20°C)
Relative density:	2.36 g/cm ³ (20°C)
Volatile component:	Not available
Relative vapour density:	Not available
Vapour pressure:	Not available
Autoignition Temp:	Not applicable
Flash point:	Not applicable
Lower Explosive Limit:	Not applicable
Upper Explosive Limit:	Not applicable
Decomposition Temp:	>150 °C
Viscosity:	Not applicable
Evaporation rate:	Not applicable

STABILITY & REACTIVITY

Stability: Product is stable under normal conditions of use, storage and temperature.

Conditions to avoid: Avoid excessive heat, direct sunlight, static discharges, moisture, and temperature extremes. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

Hazardous decomposition products: Thermal decomposition can lead to release of Sulphur dioxide and sodium oxide.

Hazardous reactions: Reacts with humid air. Reacts with acids releasing Sulphur dioxide.

Hazardous polymerization: Will not occur.

Incompatibles: Incompatible with nitrates, nitrites, acids and oxidizing agents.

TOXICOLOGICAL INFORMATION

Acute Health Effects

Swallowed: Although unlikely in an occupational setting, ingestion of the material may be harmful. Ingestion of Sulphite salts may cause gastric irritation. Large doses may produce violent colic, diarrhoea, circulatory disturbance, depression of vital functions and, sometimes, death.

Eye: Causes severe eye irritation including redness, stinging and possible damage.

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Skin: Contact dermatitis may occur. Entry into the blood-stream through cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Inhaled: Inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Sulphur dioxide is irritating. Short-term exposure causes constriction of the bronchi. Symptoms of poisoning include throat irritation, coughing, chest tightness, difficulty with breathing, tears, eye smarting and a suffocating feeling. Substantial exposures directly irritate the airway, additionally causing infection of the conjunctiva, difficulty swallowing, and redness of the pharynx. Other symptoms may include vomiting, diarrhoea, abdominal pain, fever, headache, vertigo, agitation, tremor, convulsions, and peripheral nerve inflammation. Regular exposure may reduce the sense of smell.

Chronic Health Effects: Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Sulphites and bisulphites can cause narrowing of the airways, stomach upset, flushing, low blood pressure, tingling sensation, itchy wheal, swelling and shock, and asthmatics are especially prone. They induce allergic-like reactions which can occur on first contact with the material.

Toxicity

Acute Oral Toxicity, Rat, LD50: 1131 mg/kg (EPA CCID)
Acute Oral Toxicity, Rat, LD50: 1540 mg/kg (Manufacturer)
Acute Dermal Toxicity, Rabbit, LD50: >2000 mg/kg
Acute Inhalation Toxicity, LC50: No data available.

Irritation/corrosion

Skin: Irritating to skin. (Guinea pig)
Eyes: Irritating to eyes with risk of serious damage. (Rabbit)

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Mutagenic effects: Not available.

Reproductive or developmental effects: Not available.

Aspiration hazard: No data available.

Specific target organ toxicity: No data available.

Sensitisation (respiratory/contact): May cause respiratory sensitisation including bronchospasm. The substance is an allergen which can cause asthma and anaphylaxis in predisposed individuals. Contact dermatitis may occur in susceptible individuals.

ECOLOGICAL INFORMATION

Ecotoxcity: Harmful to aquatic life with long lasting effects. Harmful in the soil environment and to terrestrial vertebrates.

Ecotoxicity data:

Fish (*Lepomis macrochirus*), 96h LC50: 32 mg/L
Crustacean (*Daphnia magna*), 48h EC50: 89 mg/L
Algae (*Chlamydomonas reinhardtii*), EC50: 16-32 mg/L
Chronic, Crustacean (*Daphnia magna*), 21 day NOEC: >10 mg/L
Acute Oral Toxicity, Rat, LD50: 1131 mg/kg (EPA CCID)

Persistence and Degradability: Rapidly degradable.

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Mobility: Highly soluble in water. Unlikely to be retained in the soil environment.

Bioaccumulation: Bioaccumulation in organisms is not expected (log Pow) <1).

COD: 165 mg O₂/g.

Products of Biodegradation: No data available. DO NOT discharge into sewer or waterways.

DISPOSAL CONSIDERATIONS

Disposal of Hazardous Substances is subject to the Resource Management Act and Council By-Laws in addition to HSNO requirements. Must not be disposed of in household rubbish.

Product: Recycle wherever possible. Special hazard may exist - specialist advice may be required. The product may be treated so that it is no longer hazardous by a means other than dilution. This includes incineration at an approved site, burial in a landfill or treatment at a sewage facility. Consult a Waste Management Company or authorized landfill for disposal options.

Packaging: Recycle wherever possible. Special hazard may exist - specialist advice may be required. Packaging should be rendered incapable of containing any material. Puncture containers to prevent re-use and bury at an authorised landfill. Empty containers may be decontaminated. The residual contents of the package must be diluted to below the thresholds for the respective hazard and the diluted residue is 1% or less of the volume of the package. Alternatively, consult an approved Waste Management company for disposal options or dispose of at an approved waste disposal facility. Observe all label safeguards until containers are cleaned and destroyed. Where possible retain label warnings and SDS and observe all notices pertaining to the product.

TRANSPORT INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG.
Not classified as a Dangerous Good under NZS 5433:2012 Transport of Dangerous Goods on Land.

REGULATORY INFORMATION

HSNO Classifications: 6.1D, 6.3A, 8.3A, 6.5A, 6.5B

EPA Approval number: HSR001548; Disulfurous acid, disodium salt, (sodium metabisulphite)

OTHER INFORMATION

End of SDS.