

Safety Data Sheet – YM-FAB WOB NP1



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Ym-Fab WOB NP1
Other name(s): Mixed formulation of Sodium metabisulphite and Sodium benzoate

Recommended Use of the Chemical: For the Control of certain fungal diseases including Botrytis on grape vines, ornamentals, pome and stone fruit and vegetables as per Directions for use.
Post harvest wash for fruit, vegetables and nuts in run to waste systems.

Supplier: Wobelea Pty Ltd
ABN: 60 005 363 833
Street Address: 18 Embrey Court, Pakenham
Victoria 3810 Australia

Telephone Number BH: +61 3 5940 1077
Telephone Number AH: +61 3 5997 1690
Emergency Contact Telephone: 0427 367 561 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Poison Schedule	S5 - caution
Classification	Acute oral toxicity - Category 4, Skin corrosion/irritation – Category 2, Serious eye damage - Category 1,
Legend	Classification drawn from HSIS and EC directive 1272/2008

SIGNAL WORD: DANGER

LABEL ELEMENTS: GHS



Hazard Statement(s):

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H315 May cause skin irritation
H335 May cause respiratory irritation
H317 May cause an allergic skin reaction

Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

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P280 Wear protective gloves / protective clothing / eye protection / face protection.

P271 Use outdoors or in a well ventilated area

P261 Avoid breathing dust or fumes

P272 Contaminated work clothing should not be allowed out of the workplace

Response:

P301+P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.

P330 Rinse mouth.

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/physician.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

Suggested Storage:

P405 Store locked up

P403 + P233 Store in a well ventilated area and keep container tightly closed.

Disposal:

P501 Dispose of contents and container in accordance with local, regional and national regulations.

Other Hazards:

AUH031 Contact with acids liberates toxic gas.

Poisons Schedule (SUSMP):

S5 Caution.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
Sodium metabisulphite – (slowly releases sulfur dioxide)	7681-57-4	< 50%
Sulfur Dioxide	7446-09-5	
Sodium benzoate	532-32-1	>50%
Cellulose	9004-34-6	< 1-10%

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested.

Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Encourage patient to blow nose to ensure clear passage of breathing.

Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

Transport to hospital, or doctor, without delay.

Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.

Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).

As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.

Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

This must definitely be left to a doctor or person authorised by him/her.

Skin Contact:

If skin contact occurs, remove contaminated clothing and wash skin with running water and soap if available.

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If irritation occurs seek medical advice.

Eye Contact:

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Ingestion:

IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.

For advice, contact a Poisons Information Centre or a doctor. Urgent hospital treatment is likely to be needed.

In the meantime, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.

If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.

Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

ONLY INDUCE vomiting if instructed by Doctor or qualified first aid- with fingers down the back of the throat, **ONLY IF CONSCIOUS**. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Advice to Doctor: -

Treat symptomatically based on judgement of doctor and individual reactions of patient.

Medical Conditions Aggravated by Exposure: - No information available on medical conditions which are aggravated from exposure to this product. Repeated exposures are unlikely to cause any chronic effect.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Can cause corneal burns.

Indication of any immediate medical attention and special treatment needed

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

For poisons (where specific treatment regime is absent):

BASIC TREATMENT

Establish a patent airway with suction where necessary.

Watch for signs of respiratory insufficiency and assist ventilation as necessary. Administer oxygen by non-rebreather mask at 10 to 15 L/min.

Monitor and treat, where necessary, for pulmonary oedema. Monitor and treat, where necessary, for shock.

Anticipate seizures.

DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred. Positive-pressure ventilation using a bag-valve mask might be of use.

Monitor and treat, where necessary, for arrhythmias.

Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.

Drug therapy should be considered for pulmonary oedema.

Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.

Treat seizures with diazepam.

Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

Treat symptomatically.

Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung oedema often do not

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manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate spray, by a doctor or a person authorised by him/her should be considered. (ICSC24419/24421)

5. FIRE FIGHTING MEASURES

Clear area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow firefighting water to reach waterways, drains or sewers. Store firefighting water for treatment.

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder). Use extinguishing media to suit surrounding area.

Specific hazards arising from the chemical:

Mixed formulation - Non-combustible material as percentage of cellulose (combustible) is < 1-10%. May omit carbon oxides on burning.

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

Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes, including those of sulfur dioxide. Fire fighters to wear self-contained breathing apparatus (SCBA) and suitable protective clothing such as fire fighting helmet, coat, trousers, boots and gloves - if risk of exposure to products of decomposition.

Fire/Explosion hazard:

Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.

Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).

Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns' diameter will contribute to the propagation of an explosion.

Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), other pyrolysis products typical of burning organic material. May emit poisonous fumes.

Decomposition may produce toxic fumes of: sulfur oxides (SO_x), sulfur dioxide (SO₂), metal oxides May emit poisonous fumes. May emit corrosive fumes. In some fires a sodium sulfide residue may remain and is an explosion hazard and is strongly alkaline in the presence of water

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up: Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Increase ventilation. Shut off all possible sources of ignition. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water.

Evacuation Criteria: Evacuate all unnecessary personnel.

Personal Precautionary Measures: Personnel involved in the clean-up should wear full protective clothing as listed in section 8.

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Moderate hazard.

CAUTION: Advise personnel in area.

Alert Emergency Services and tell them location and nature of hazard.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. Keep out of reach of children. Use in a well ventilated area. Wear protective clothing when risk of exposure occurs.

Prevent concentration in hollows and sumps.

Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)

Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame. Establish good housekeeping practices.

Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

Store in original container/packaging as approved by manufacturer.

Suitable container:

Polyethylene or polypropylene container.

Check all containers are clearly labelled and free from leaks.



+ X + O + + +

X — Must not be stored together

O — May be stored together with specific preventions

+ — May be stored together

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	sodium metabisulfite	Sodium metabisulfite	5 mg/m ³	Not Available	Not Available	Not Available
Australia Exposure	sulfur dioxide	Sulphur dioxide	5.2 mg/m ³ / 2 ppm	13 mg/m ³ / 5 ppm	Not Available	Not Available

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Standards

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EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
sodium metabisulfite	Sodium metabisulfite	5 mg/m ³	5 mg/m ³	220 mg/m ³
sulfur dioxide	Sulfur dioxide	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
sodium metabisulfite	Not Available	Not Available
sulfur dioxide	100 ppm	100 [Unch] ppm

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
sodium benzoate	Benzoic acid, sodium salt	20 mg/m ³	220 mg/m ³	810 mg/m ³

Ingredient	Original IDLH	Revised IDLH
sodium benzoate	Not Available	Not Available

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

Personal Protection:



Respiratory protection

Type E-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor

Half-Face Respirator

Full-Face Respirator

Powered Respirator

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up to 10 x ES	E P1 Air-line*	-	E PAPR-P1 -
up to 50 x ES	Air-line**	E P2	E PAPR-P2
up to 100 x ES	-	E P3	-
		Air-line*	-
100+ x ES	-	Air-line**	E PAPR-P3

* - Negative pressure demand ** - Continuous flow

A (All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds (below 65 degC)

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White crystals or powder with a pungent sulfur dioxide odour. Freely soluble in water, glycerol and slightly soluble in alcohol. The material slowly releases sulfur dioxide at ambient temperatures. Acts as a reducing agent.		
Physical state	Divided Solid	Relative density (Water = 1)	1.40-1.48
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	120-150
Melting point / freezing point (°C)	>300 dec.120-150	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	144- 190.13 mixed
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Reacts, Miscible	pH as a solution (1%)	Approximately 6
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available

10. STABILITY AND REACTIVITY

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STORAGE INCOMPATIBILITY:

Contact with acids produces toxic fumes

Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.

These trifluorides are hypergolic oxidisers. They ignite on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.

The state of subdivision may affect the results.

Inorganic reducing agents react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive. Their reactions with oxidizing agents may be violent.

Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions

Metabisulphites:

decompose with heat

are slowly oxidised on exposure to air and water

hydrates are bisulfites; conversely when dehydrated they become metabisulfites - a maximum strength of about 40% bisulfite solution is attainable with certain counter-ions

may produce corrosive acids when mixed with water dependent on the counter-ion react with acids to produce sulfur dioxide (SO₂)

Segregate from alcohol, water.

Sulfur Dioxide:

reacts with water or steam forming sulfurous acid; reaction may be violent

reacts with acrolein, alcohols, aluminium powder, alkali metals, amines, bromine, pentafluoride, caustics, caesium, acetylene carbide, chlorates, chlorine trifluoride, chromium powder, copper or its alloy powders, diethylzinc, fluorine, lead dioxide, lithium acetylene carbide, metal powders, monolithium acetylde-ammonia, nitril chloride, potassium acetylene carbide, potassium acetylde, potassium chlorate, rubidium carbide, silver azide, sodium, sodium acetylde, stannous oxide; reaction may be violent decomposes above 60 deg. C releasing oxides of sulfur

Incompatible with alkalis, alkylene oxides, ammonia, aliphatic amines, alkanolamines, amides, organic anhydrides, caesium monoxide, epichlorohydrin, ferrous oxide, halogens, interhalogens, isocyanates, lithium nitrate, manganese, metal acetylides, metal oxides, perbromyl fluoride, red phosphorus, potassium azide, rubidium acetylde, sodium hydride, sulfuric acid

attacks some plastics, coatings and rubber

attacks metals, especially chemically active metals, in the presence of moisture.

Sulfites and Hydrosulfites (Dithionites):

may react explosively with strong oxidising agents.

react with water or steam to produce corrosive acid solutions and sulfur oxide fumes - aqueous solutions are incompatible with oxidisers, strong acids, alkalis, ammonia, aliphatic amines, alkanolamines, alkylene oxides, amides, epichlorohydrin, organic anhydrides, isocyanates, nitromethane, vinyl acetate

aqueous solutions attack metals in presence of moisture

generate gaseous sulfur dioxide in contact with oxidising and non oxidising acids

NOTE: May develop pressure in containers; open carefully. Vent periodically. Mixing with sodium nitrite results in vigorous exothermic reaction.

Chemical stability:

Unstable in presence of incompatible materials

Product is considered stable

Hazardous Polymerisation will not occur

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Inhaled:

Good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

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If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.

Sulfur dioxide is irritating. Short-term exposure causes constriction of the bronchi.

Ingestion:

Sodium benzoate:

The material has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

[Large dose (8-10 g) may produce gastric pain, nausea and vomiting. Rapidly absorbed from the gastrointestinal tract and conjugated with glycine in the liver to form hippuric acid which is excreted within 12 hours; up to 97% is excreted within 4 hours. When taken in large doses may be excreted as benzoyl glucuronic acid.

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 grams may be fatal or may produce serious damage to the health of the individual.

Ingestion of sulfite salts may cause gastric irritation. Large doses may produce violent colic, diarrhea, circulatory disturbance, depression of vital functions and, sometimes, death.

Skin Contact:

This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition

Open cuts, abraded or irritated skin should not be exposed to this material

Entry into the blood-stream, through, for example, 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.

Eye:

If applied to the eyes this material may cause severe eye damage.

Chronic:

Reactions to benzoic acid have been reported. It may worsen asthma, skin rash or skin disease (angio-oedema). Effect may be worse if exposed persons are also taking aspirin tablets.

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.

Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity

Sodium metabisulphite;

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

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.

Sulfites and bisulfites 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.

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.

Chronic exposure to sulfur dioxide (SO₂) particle complexes in polluted air can aggravate chronic disease, such as asthma, chronic pulmonary disease, and coronary artery disease. It is not clear what is the concentration level required to cause these effects.

Animal testing showed that simultaneous exposure to benz(a)pyrene and sulfur dioxide increases the rate of cancer development compared to exposure to only one of the above substances.

Occupational asthma has been reported in laundry workers and a vinegar worker exposed to sodium metabisulfite

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Sodium mebatisulphite:

TOXICITY	IRRITATION
dermal (rat) LD50: >2000 mg/kg ^[1]	*CCInfo. No. 1478367 [BASF]
Oral (rat) LD50: 500 mg/kg ^[2]	[ICI UK]
	[Sigma/Aldrich]
	Eye (rabbit): IRRITANT *
Sulfur Dioxide:	
TOXICITY	IRRITATION
Inhalation (rat) LC50: 2520 ppm/1hd ^[2]	Nil reported
1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

Sodium benzoate:

TOXICITY	IRRITATION
Oral (rat) LD50: ca.4.07 mg/kg ^[1]	Nil reported TOXICITY

Sodium metabisulphite:

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyper reactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

Sulfur Dioxide:

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyper reactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

400-500 ppm - immediately dangerous to life. NOTE: Aggravates chronic pulmonary disease and increases the risk of acute and chronic respiratory disease - condition aggravated by smoking.

Sodium benzoate:

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

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For benzoates:

Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol is considered to be unharmed and of low acute toxicity. They may cause slight irritation by oral, dermal or inhalation exposure except sodium benzoate which doesn't irritate the skin. Studies showed increased mortality, reduced weight gain, liver and kidney effects at higher doses, also, lesions of the brains, thymus and skeletal muscles may occur with benzyl alcohol. However, they do not cause cancer, genetic or reproductive toxicity. Developmental toxicity may occur but only at maternal toxic level.

NOTE: Oral doses of 8-10g may cause nausea and vomiting, though tolerance in human is 50 g/day. Use in food limited to 0.1%. [IC]

Acute Toxicity	✓	Carcinogenicity	⊖
Skin Irritation/Corrosion	✓	Reproductivity	⊖
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	⊖
Respiratory or Skin sensitisation	⊖	STOT - Repeated Exposure	⊖
Mutagenicity	⊖	Aspiration Hazard	⊖

Legend: ✗ – Data available but does not fill the criteria for classification ✓ – Data required to make classification available
 ⊖ – Data Not Available to make classification

12. ECOLOGICAL INFORMATION

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
sodium metabisulfite	EC20	96	Algae or other aquatic plants	=20mg/L	1
sodium metabisulfite	EC50	96	Algae or other aquatic plants	=40mg/L	1
sodium metabisulfite	LC50	96	Fish	=21mg/L	1
sodium metabisulfite	EC50	48	Crustacea	89mg/L	2
sodium metabisulfite	NOEC	504	Crustacea	>10mg/L	2
sulfur dioxide	EC50	384	Crustacea	2757.902mg/L	3
sulfur dioxide	EC50	96	Algae or other aquatic plants	12.60493mg/L	3
sulfur dioxide	LC50	96	Fish	1322.54506mg/L	3

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
sodium benzoate	EC50	48	Crustacea	<650mg/L	1
sodium benzoate	EC50	96	Crustacea	>100mg/L	1
sodium benzoate	LC50	96	Fish	>100mg/L	4
sodium benzoate	EC50	72	Algae or other aquatic plants	>30.5mg/L	2
sodium benzoate	NOEC	72	Algae or other aquatic plants	0.09mg/L	2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bio Concentration Data 7. METI (Japan) - Bio Concentration Data 8. Vendor Data

For Sulfur Dioxide (SO₂): Vapor Pressure: 3,000 mm Hg @ 20°C; Henry's Law Constant: 1.23 mol. L-1/atm-1 @ 25C.

Environmental Fate: Natural sources of sulfur dioxide include volcanoes and volcanic vents, decaying organic matter, solar action on seawater and oxidation of dimethyl sulfide emitted from the ocean. On a global scale, man-made emissions represent a significant contribution to the SO₂ emitted to the atmosphere and these emissions are approximately equal to natural emissions.

Atmospheric Fate: Sulfur dioxide is typically present in a gaseous phase and, once released into the atmosphere, may be converted to other compounds, and/or removed from the atmosphere by various mechanisms.

DO NOT discharge into sewer or waterways.

|log Pow (Octanol/water partition coefficient): -3.7|Risk of bioaccumulation in aquatic species is low, Inorganic product which cannot

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be eliminated from effluent treatment plants by biological purification processes. The product may lead to a high chemical consumption of oxygen in biological sewage works or natural waters and have a negative effect on aquatic organisms. Toxicity to fish- LC50: 15-220 mg/L/96Hr (Salmo gairdneri)|Toxicity to bacteria- EC/LC50: 56 mg/L/17Hr (Pseudomonas putida)|COD: 165 mg O2/g product. [BASF Aust

For benzoates:

The environmental characteristics for benzoates is ultimately determined by the properties of counter-ions, and is assumed to be non-toxic. Environmental Exposure and Fate: Distribution models indicate that water and soil are the main environmental pathways of benzyl alcohol, benzoic acid, sodium and potassium benzoates. No volatilization to the atmosphere or adsorption to sediments is expected. Physical chemical properties and use patterns indicate water to be the main pathway for these substances, however, based on the chemical structure and organic chemistry, no hydrolysis is expected at pH ranges of 4 – 11.

DO NOT discharge into sewer or waterways.

Sodium Metabisulphite:

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sulfur dioxide	LOW	LOW
Ingredient	Bioaccumulation	
sulfur dioxide	LOW (LogKOW = -2.2002)	

Mobility in soil

Ingredient	Mobility	
sulfur dioxide	MEDIUM (KOC = 2.989)	
Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Sodium Benzoate:

Bio accumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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Product / Packaging disposal

Containers may still present a chemical hazard/ danger when empty.
Return to supplier for reuse/ recycling if possible.

Otherwise:

If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

Where possible retain label warnings and SDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

DO NOT allow wash water from cleaning or process equipment to enter drains.

It may be necessary to collect all wash water for treatment before disposal.

In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.

Where in doubt contact the responsible authority.

Recycle wherever possible or consult manufacturer for recycling options.

Consult State Land Waste Management Authority for disposal.

Bury residue in an authorised landfill.

Recycle containers if possible, or dispose of in an authorised landfill.

14. TRANSPORT INFORMATION

Road and Rail Transport

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Marine Transport

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Air Transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

Transport in bulk according to Annex II of MARPOL and the IBC code

Source	Product name	Pollution Category	Ship Type
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in bulk	Sodium benzoate	Z	3

15. REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Safety, health and environmental regulations / legislation specific for the substance or mixture

SODIUM BENZOATE (532-32-1) and SODIUM METABISULPHITE (7681-57-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Y

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Canada - DSL	Y
Canada - NDSL	N (sodium benzoate) (sulfur dioxide, sodium metabisulphite)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y / N (sodium metabisulphite)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

Classification of the chemical:

Acute Oral Toxicity - Category 4
Eye Damage - Category 1

Hazard Statement(s):

H302 Harmful if swallowed.
H318 Causes serious eye damage.

Poisons Schedule (SUSMP): S5 Caution.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Disclaimer:

All information provided in this data sheet or by our technical representatives is compiled from the best 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 either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Wobelea Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives. Please note this product is a blended product and is formulated with low concentration of some of the actives. Therefore, this SDS should be used a guideline only. Further information can be obtained from the manufacturer if required.

The user should be aware of changing technology, research, regulations, and analytical procedures that may require changes herein. The above data is supplied upon the condition that persons will evaluate this information and then determine its suitability for their use.

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***** END OF SDS *****

Product Name: YMFAB WOB NP1