SAFETY DATA SHEET YM-FAB HIHO 1000 LTR SOLUTION



Issue Date: 20.1.2017 Revised 8.3.2022 Revise before: 8.3.2027

Version: 1.1

Safety data sheet according to WHS and ADG requirements

SECTION 1: IDENTIFICATION OF THE SUBSTANCE:

Product Name:	YM-FAB HIHO 1000 LTR SOLUTION – READY TO USE		
Relevant Use:	Water balancer and filter aid for Agricultural Fruit and Vegetable Washing.		
Company:	Wobelea Pty Ltd		
Address:	18 Embrey Court, Pakenham		
Phone:	61 + (3) 5940 1077		
Emergency Telephone	Poison Information Australia 13 11 26		
Emergency Other	Poison Information New Zealand 0800 764 766		
Emergency:	61 + (3) 5997 1690 AH		
Emergency other number:	0427 367 561		

SECTION 2: HAZARDS IDENTIFICATION

Classification of the mixture

GHS Label elements

Hazardous Chemical and Non Dangerous Good as per % of active ingredients according to WHS Regulations and the ADG Code.

Poisons Schedule Not applicable Low rating – Skin irritation, Eye irritation category 2A, Aquatic hazard, specific target organ toxicity. Classification drawn from HSIS and Wobelea Pty Ltd.
Label Elements



SIGNAL WORD	WARNING
Hazard Statement	
	May intensify fire; oxidiser
	May cause skin irritation
	May cause serious eye irritation
	May cause allergy or asthma symptoms or breathing difficulties if inhaled
	May cause respiratory irritation if inhaled.
	May cause harmful effects to aquatic life
	May cause skin dryness and cracking
Supplementary statement	t
	Not applicable
Precautionary Statement	s Prevention
	Use in a well ventilated area or wear respiratory protection
	Keep/store away from heat/sparks/open flames - No smoking
	Take precaution to avoid mixing with combustibles/organic material
	Avoid breathing dust fumes
	Wear protective gloves/protective clothing/eye protection/face protection
SECTION 2. HAZA	DDS IDENTIFICATION Cont

SECTION 2: HAZARDS IDENTIFICATION - Cont

Precautionary Statements Response

	IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing Take off contaminated clothing and wash before reuse If experiencing respiratory systems: Call a POISON CENTRE or a doctor IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists seek medical advice. In case of fire use alcohol resistant foam or fine spray/water fog for extinction IF ON SKIN: Wash with plenty of soap and water. Seek medical advice Call a POSION CENTRE or doctor if you feel unwell.
Precautionary Statement Storage	Store locked up Store in a well ventilated place. Keep container tightly closed
Precautionary Statement Disposal	Dispose of contents / container in accordance with local regulations

SECTION 3: COMPOSTION / INFORMATION ON INGREDIENTS

Substances		
CAS Number	% (weight)	Name
7775-27-1	2-7%	Sodium Persulphate
10124-56-8	1 -5%	Sodium Hexametaphosphate
144-55-8	20 - 40%	Sodium Bicarbonate
497-19-8	2 - 10%	Sodium Carbonate

SECTION 4: FIRST AID

ye Contact: If this product comes into contact with eye:
Wash out immediately with fresh 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
 Seek medical attention without delay; if pain persists or recurs seek medical advice
 Removal of contact lenses after an eye injury should only be undertaken by a skilled person.
kin Contact: If skin contact occurs:
Immediately remove all contaminated clothing, including footwear
Flush skin and hair with running water and soap if available
Seek medical attention in event of irritation
nhalation: If inhalation occurs:
 If fumes, aerosols or combustion products are inhaled remove from contaminated area
Move from area and give fresh air
Lay patient down. Keep warm and rested. Seek medical attention if breathing becomes difficult
Prostheses such as false teeth, which may block airway should be removed where possible prior to initiating first aid.
 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, doctor without delay
ngestion: If ingested:
If swallowed do NOT induce vomiting
Contact a Poisons Centre or a doctor to seek further advice
Urgent hospital treatment may be needed
 Qualified first aid personnel should treat patient following observation and employing supportive measures as indicated by the patients condition
• If the services of a medical officer or doctor are available the patient should be placed in their care and a copy of SDS 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 with a copy of SDS
 Only give a glass of water and/or induce vomiting if you are advised by
Poisons Centre or Doctor.
nuication of any immediate medical attention and special treatment needed: The severity of the symptoms described will vary dependent on the concentration and the length of exposure. If adverse symptoms develop the casualty should be

transferred to hospital as soon as possible with a copy of SDS As in all cases of suspected poisoning follow the ABCDE's of emergency medicine (airway, breathing, circulation, disability, exposure) then the ABCDE's of toxicology (antidotes, basics, change absorption, change distribution, change elimination)

SECTION 4: FIRST AID - Cont..

Indication of any immediate medical attention and special treatment needed for Sodium carbonate

For acute or short-term repeated exposures to highly alkaline materials:

- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be
- necessary.Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deeppenetration into the tissue.

Alkalis continue to cause damage after

exposure.INGESTION:

Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- Neutralising agents should never be given since exothermic heat reaction may compound injury.
- * Catharsis and emesis are absolutely contra-indicated.
- * Activated charcoal does not absorb alkali.
- * Gastric lavage should not
- be used. Supportive care

involves the following:

- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).
- SKIN AND EYE:
- Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media

Fire:

USE FLOODING QUANTITIES OF WATER FROM A PROTECTED POSITION

Note: < 10% active ingredient as Sodium Persulphate states do not use: dry chemical, CO2 foam or halogenated-type extinguishers

Special hazards arising from the substrate or mixture

Fire incompatibility

- Avoid storage with reducing agents
- Avoid any contamination of this material especially with oxidising agents is nitrates, oxidising acids, chlorine bleaches, pool chlorine etc as ignition may result

Advice for Fire Fighters

Fire Fighting

- Note: < 10% active ingredient as Sodium Persulphate states do not use: dry chemical, CO2 foam or halogenated-type extinguishers
- Alert fire brigade and tell them location and nature of hazard
- Use fire-fighting procedures suitable for surrounding area
- May be reactive and/or explosively reactive
- Wear full body protective clothing with breathing apparatus
- · Prevent by any means available spillage from entering drains or water courses

Fire explosion/ hazard

- Will not burn but may increase intensity of fire one part of mixture will exhibit difficult combustion or is difficult to ignite
- Not considered a significant fire risk, however containers may burn
- Heating may cause expansion or decomposition leading to violent rupture of containers
- Decomposition may produce toxic fumes of sulfur oxides (SOx), sodium monoxide (Na2O), carbon monoxide (CO), carbon dioxide (CO2) other pyrolysis products typical of burning organic material, water vapour, sodium carbonate, phosphorous oxides (POx) and metal oxides. May omit corrosive fumes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Clean up all spills immediately

- Avoid breathing dust and contact with skin and eyes
- Wear protective clothing, gloves safety glasses and dust respirator
- Use dry clean up procedures and avoid generating dust
- Remove all ignition sources

Major spills

Minor Spills

Moderate hazard

- CAUTION Advise personnel in area
- Alert emergency services and tell them location and nature of hazard
- Control personal contact by wearing protective clothing.
- See Section 12 for environmental information
- Local authorities should be advised if significant spillages cannot be contained.

Personal protect equipment advice is contained in Section 8 of the SDS

SECTION 7: HANDLING	AND STORAGE
Precautions for safe handli	ing
Safe Handling	
	Avoid all personal contact including inhalation
	• Wear protective clothing when risk of exposure occurs
	• Use in a well ventilated area
	• Always wear protective equipment and wash off any spillage from clothing
	• Keep material away from light, heat, flammables or combustibles
Safe Handling	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 of 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
Other Information	
	Store in original containers
	Keep containers sealed
	Store in cool dry area protected from environmental extremes
	Store away from incompatible materials and foodstuff containers
In addition Goods of Class 5	.1, packing Group II should be stored in packages and be separated from buildings, tanks and compounds containing other dangerous
goods in tanks, and from pro	perty boundaries by a distance of at least 5 metres.
Conditions for safe storage,	including any incompatibilities
Suitable container	Do not repack. Use containers supplied by manufacturer
	• Lined metal can, lined metal pail/can, plastic pail, poly-liner drum
	• For solids and materials with a viscosity of at least 2680 cST (23 deg.C) removable head packaging and cans with friction
	closures may be used
Storage incompatibility	Avoid strong acids, acid chlorides, acid anhydrides and chloroformates
	Avoid reaction with chlorine trifluoride and bromine trifluoride
	• These trifluorides are hypergolic oxidizers. They ignite on contact (without external heat or ignition) with recognized fuels.
	Contact with these materials following an ambient or slightly elevated temperature is often violent and may produce

ignition.

- Avoid contact with copper, aluminium and their alloys
- Phosphates are incompatible with oxidizing and reducing agents
- Phosphates are susceptible to formation of highly toxic and flammable phosphine gas in the presence of strong reducing agents such as hydrides.
- Partial oxidation of phosphate by oxidizing agents may result in the release of toxic phosphorous oxides.
- Avoid reaction with oxidizers

Segregate from mono-ammonium phosphate, acids and strong oxidizers. Reacts rapidly with acidic materials generates carbon dioxide gas, which may pressurize,

even violently rupture containers.



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

NGREDIENT DA	АТА									
Source	Ingredient		Material Name			TWA	STEL		Peak	Notes
Australia Exposure Standards	Sodium persulpha	ate Sodium Persulph		nate		Not available	Not avai	lable	0.1 mg/m3	Not available
						TEEL -1	TEEL -	2	TEEL-3	
Australia Exposure Standards	Sodium bicarbon	ate	Sodium bicarbo	nate		13 mg/m3	140 mg/	m3	840 mg/m3	
Australia Exposure Standards	Sodium hexametaphospha	ate	Sodium phospha hexametaphosph	ate, tribasic, (Sodium nate; Calgon)		19 mg/m3	200mg/r	n3	1200 mg/m3	
Com	ponent		EU OEL	Austria		Australia	1		Denmar	k
Component		Malays	ia	France	Ger	many		Hunga	ary	
			<u> </u>	x . x				N .T.		
Component		New Ze			neu	neriands		INOFWa	ly	

Component	Poland	Portugal	Romania	Russia
Calcium sulfate	10.0 mg/m ³ TWA <2% free crystalline silica and containing no asbestos	10 mg/m ³ TWA inhalable fraction	Not determined	Not determined
Crystalline silica (impurity)	$\begin{array}{l} 2 \ mg/m^3 \ TWA > \!\! 50\% \\ free \ crystalline \ silica \\ total \ inhalable \ dust \\ 0.3 \ mg/m^3 \ TWA \\ > \!\! 50\% \ free \\ crystalline \ silica \\ respirable \ dust \\ 4.0 \ mg/m^3 \ TWA \ 2\% \ to \\ 50\% \ free \ crystalline \\ silica \\ total \ inhalable \ dust \\ 1.0 \ mg/m^3 \ TWA \ 2\% \ to \\ 50\% \ free \ crystalline \\ silica \\ total \ inhalable \ dust \\ 1.0 \ mg/m^3 \ TWA \ 2\% \ to \\ 50\% \ free \ crystalline \\ silica \\ respirable \ dust \\ \end{array}$	0.025 mg/m ³ TWA respirable fraction	Not determined	1 mg/m ³ MAC 3 mg/m ³ STEL 1 mg/m ³ TWA aerosol Fibrogenic substance
Component	Spain	Switzerland	Turkey	UK
SECTION 8:	EXPOSURE CONTROLS	/PERSONAL PROTECTION	– cont	
Calcium sulfate	10 mg/m ³ VLA-ED this value is for the particulated matter that is free from Asbestos and contains less than 1% of Crystalline silica	3 mg/m ³ MAK respirable	Not determined	Not determined
Crystalline silica (impurity)	0.1 mg/m ³ VLA- ED respirable fraction	0.15 mg/m ³ MAK respirable	Not determined	0.3 mg/m ³ STEL calculated respirable 0.1 mg/m ³ TWA respirable

Exposure Controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls Appropriate can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. engineering controls The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Personal protection Eye and face Safety glasses with side shields. Chemical goggles. protection Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. Skin See Hand protection below protection

Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Suitability and durability of glove type is dependent on usage. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present. polychloroprene. nitrile rubber. butyl rubber. Polyvinyl chloride (PVC) Wear safety footwear or safety gumboots E.g Rubber Note: This chemical is in a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application. Check with manufacturer of PPE if unsure for further advice.
Body protection	See Other protection below
Other protection	Overalls. P.V.C. apron. Barrier cream. Eye wash unit For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds.
Thermal hazards	Not Available

Respiratory protection; - Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1	-	PAPR-P1
	Air-line*	-	-
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	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)

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurementdata, and frequency and likelihood of the worker's exposure ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection.
 These may begovernment mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a completerespiratory protection program.

Use approved positive flow mask if significant quantities of dust becomes airborne. Try to avoid creating dust conditions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical state	Divided Solid	Relative density (Water = 1)	Not available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not available.
pH (as supplied)	Not Applicable	Decomposition temperature	>400
Melting point / freezing point	70 – 600 Decomposes	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling	Not available.	Molecular weight (g/mol)	Not available
Flash point (°C)	Non Flammable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Non Flammable	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)	Nil @ 38 C.
Vapour pressure (kPa)	Not available.	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	8.0
Vapour density (Air = 1)	Not available.	VOC g/L	Not Available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	See section 7		
Chemical Stability	Unstable in the presence of incompatible materials.		
	Product is considered stable under normal nandling conditions and nazardous polymerisation will not occur.		
	powerful oxidants.		
Possibility of	See section 7		
hazardous reactions			
Conditions to avoid	See section 7		
Incompatible	See section 7		
materials			
Hazardous	See section 5		
decomposition			
products			

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on toxicological effects Inhaled The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Inhalation of dust in high concentration may cause irritation of respiratory system. The body's response to such irritation an cause further lung damage. 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. 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.

	Inhalation may cause a sore throat, coughing and sneezing.				
Ingestion	Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident.				
	Ingestion of large quantities may cause abdominal pain and gastro-intestinal distention.				
	Accidental ingestion of <u>large quantity of material</u> may be harmful, however due to low % of sulphate in the product this statement is a warning only; animal experiments indicate that ingestion of less than 150gm may be fatal or may produce serious damage to the health of the individual. Sulphates are used extensively as food additives and this indicates a good tolerance of small amounts.				
	Note inorganic polyphosphates are used extensively in domestic and industrial products. Experiments on rats showed kidney damage, growth retardation and tetany due to low calcium. Effects can include vomiting, tiredness, fever, diarrhea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms.				
Skin contact	This material may cause mild inflammation of the skin on prolonged contact in some persons. The material may accentuate any pre-existing dermatitis condition				
	Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.				
	Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Irritation and skin reactions are possible with sensitive skin				
	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.				
	Undiluted inorganic phosphates may severely irritate the skin, but in typical cosmetic formulations (where they act as chelators) they are only mildly irritating. Even at concentrations of 1%, no irritation was observed in sensitive individuals.				
Еуе	Limited evidence or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals. Prolonged eye contact may cause inflammation characterised by a temporary redness of the conjunctiva (similar to windburn).				
	Inorganic phosphates may cause eye irritation on contact in some persons. The severity of eye irritation depends on concentration of product in formula.				
	Alkaline salts may be intensely irritating to the eyes and precautions should be taken to ensure direct eye contact is avoided. Damage may not present until 24 hours after instillation.				
Chronic	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.				
	Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.				
	In long-term animal studies, inorganic polyphosphates produced growth inhibition, increased kidney weights, bone decalcification, enlargement of the parathyroid gland, inorganic phosphate in the urine, focal necrosis of the kidney and alterations of muscle fibre size. Inorganic phosphates have not been shown to cause cancer, genetic damage or reproductive or developmental damage in animal tests.				
	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.				
	Sodium phosphate dibasic can cause stones in the kidney, loss of mineral from the bones and loss of thyroid gland function.				
	Persulphate exposure commonly manifests itself in the form of a skin rash, eczema and respiratory conditions such as asthma. Allergy may develop after repeated and prolonged exposures depending on concentration of formula.				
Sodium persulphate	TOXICITY IRRITATION				
	dermal (rat) LD50: >2000 mg/kg[1] Eye: SEVERE *				
	Inhalation (rat) LC50: >191.7 mg/l/4hr[2] Skin : Moderate Inhalation (rat) LC50: >42.9 mg/l1 hr[1]				
	Oral (rat) LD50: 700 mg/kg[1]				
Sodium	TOXICITY IRRITATION				
nexametaphosphate	Dermal (rabbit) LD50: >7940 mg/kg[2] [Manufacturer CCOH]				
	Oral (rat) LD50: >2000 mg/kg[1]Nil reported				
Sodium bicarbonate	TOXICITY IRRITATION				
	Oral (rat) LD50: >4000 mg/kg[1] Eye (rabbit): 100 mg rinse - mild				
Dense Soda Ash	Toxicity not available. Irritation not available.				
Sodium carbonate	TOXICITY IRRITATION				
	dermal (rat) LD50: >2000 mg/kg[2] Eye (Rabbit) $100mg/24h$ moderate				
	Inhalation (guinea pig) LC50: 0.8 mg/l/2hr[2) Eye (rabbit) 100 mg/30 s mild Inhalation (mana) LC50: 1.2 mg/l/2hr (2) Eye (rabbit) 100 mg/30 s mild				
	Initiation (mouse) LCOU: 1.2 mg/l/2n (2) Eye (rabbit) 500 mg SEVERE Inhelation (mot) LCOU: 2.2 mg/l/2hr (2) Shine (rabbit) 500 mg /24h mild				
	Initiatation (1at) LC50: 2.5 mg/t/2ml (2) Skin: (rabbit) Stum?/24n mild Oral (rat) D D D D: 2800 mg/t/g[1] D D: D:				
	Orac (tar) E2500. 2000 Ing/ng[1]				

r	
Legend	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
ASSORTED ACTIVES	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
SODIUM	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-
HEXAMETAPHOSPHATE	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. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates
	related to the concentration of and duration of exposure to the irritating substance.
	Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating
	substance (often particulate in nature) and is completely reversible after exposure cases. The disorder is characterised by
	dyspine cough and mucus production
SODIUM PERSUI PHATE	dyspice, cough and indeus production.
SODIEWITERSOLITIKIL	Astimative symptoms may continue for months of even years after exposure to the material ceases. This may be due to a non-
	of highly irritating compound. Kay criteria for the diagnosis of PADS include the absence of preceding requirement diagnosis in a
	of highly initiating 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 astima-like symptoms within minutes to nours 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. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates
	related to the concentration of and duration of exposure to the irritating substance.
	Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating
	substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by
	dyspnea, cough and mucus production.
	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur
	rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be
	genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to
	interactions with proteins.
	Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema.
	Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated
	reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.
	Oral (Rat, adult female) LD50: 920 mg/kg *Skin: irritant * *Rhein Perchemie MSDS
SODIUM BICARBONATE	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the
	production of vesicles, scaling and thickening of the skin.
	(human-infant) TDLo: 1260 mg/kg Skin (human): 30 mg/3d-I-mild
DENSE SODA ASH	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 nattern 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 material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to
	irritants may produce conjunctivitis.
	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling,
	the production of vesicles, scaling and thickening of the skin.
SODIUM CARBONATE	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.
	for sodium carbonate:
	Sodium carbonate has no or a low skin irritation potential but it is considered irritating to the eyes. Due to the alkaline properties
	an irritation of the respiratory tract is also possible.
	No valid animal data are available on repeated dose toxicity studies by oral, dermal, inhalation or by other routes for sodium
	carbonate. A repeated dose inhalation study, which was not reported in sufficient detail, revealed local effects on the lungs which
	could be expected based on the alkaline nature of the compound.
	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling,
	the production of vesicles, scaling and thickening of the skin.

Acute toxicity	Χ	Carcinogenicity	Ø
Skin irritation/Corrosion	\checkmark	Reproductivity	Ø
Serious eye damage/Irritation	\checkmark	STOT – Single exposure	\checkmark
Respiratory or skin sensitisation	\checkmark	STOT – Repeated exposure	Ø
Mutagenicity	Ø	Aspiration hazard	Ø

Legend: X – Data available but does not fill the criteria for classification

 \checkmark – Data required to make classification available

Ø-Data Not Available to make classification

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test	Species	Value	Source
		Duration			
Sodium persulphate	LC50	96	Fish	76.3mg/L	2
	EC50	120	Crustacea	11mg/L	2
	EC50	48	Crustacea	21.22mg/L	2
	NOEC	120	Crustacea	5mg/L	2
	EC50	72	Algae or other aquatic plants	83.7mg/L	2
Sodium hexametaphosphate	LC50	96	Fish	>100mg/L	2
1 1	EC50	48	Crustacea	>485mg/L	2
	EC50	72	Algae or other aquatic plants	>100mg/L	2
	NOEC	72	Algae or other aquatic plants	U	
			3	32mg/L	2
				8	_
Sodium bicarbonate	LC50	96	Fish	658.217mg/L	3
	EC50	4	Algae or other aquatic plants	52mg/L	4
	EC50	96	Algae or other aquatic plants	650mg/L	4
	EC50	48	Crustacea	1020mg/L	2
	NOEC	1512	Algae or other aquatic plants	>45mg/L	2
		_	3		
Sodium carbonate	EC50	48	Crustacea	=176mg/L	1
	EC50	96	Algae or other aquatic plants	242 mg/L	4
	NOEC	16	Crustacea	424 mg/L	4
	LC50	96	Fish	300mg/L	2

	EC50	96	Curstacea	67 mg/L	2
Legend	Extracted from 1. IU 2. Europe ECHA Re 3. EPIWIN Suite V3 4. US EPA, Ecotox of	CLID Toxicity gistered Substan .12 - Aquatic T latabase - Aqua	Data nces - Ecotoxicological Information - Aquati oxicity Data (Estimated) tic Toxicity Data	c Toxicity	
G P 1 1 1 1 1 1 1 1 1 1 1					

Sodium hexametaphosphate:

May cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Phosphate:

The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae.

Aquatic Fate: Lakes overloaded with phosphates is the primary catalyst for the rapid growth of algae in surface waters. Planktonic algae cause turbidity and flotation films.

DO NOT discharge into sewer or waterways.

Sodium Persulphate:

For Inorganic Sulfate:

Environmental Fate - Sulfates can produce a laxative effect at concentrations of 1000 - 1200 mg/litre, but no increase in diarrhea, dehydration or weight loss. The presence of sulfate in drinking-water can also result in a noticeable taste. Sulfate may also contribute to the corrosion of distribution systems. No health-based guideline value for sulfate in drinking water is proposed.

For Persulfates:

Environmental Fate: Persulfates will readily degrade benzene, xylene, toluene, ethylbenzene and chlorinated benzenes to mineralized end products. Reaction rates with chlorinated solvents are much slower. Aqueous persulfates are expected to degrade in the environment via several mechanisms, (e.g. breakdown in water, decomposition stimulated by the presence of metals, and reactions with organic chemicals in the soil or water).

Atmospheric Fate: There are no data available for breakdown of these substances in sunlight, (photo degradation).

DO NOT discharge into sewer or waterways.

|Ecotoxicity:|Fish LC50 (96 h): Poecillia reticulata 323 mg/l (OECD TG203)|Daphnia LC50 (48 h): 357 mg/l OECD TG202|Algal IC10 (96 h): Scenedesmus acuminatus 33 mg/l|Bacterial toxicity: hydrolysis reduction to oxygen, sodium and sulfate

Persistance and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Sodium bicarbonate	Low	Low
Sodium hexametaphosphate	No data available for all ingredients	No data available for all ingredients
Sodium persulphate	No data available for all ingredients	No data available for all ingredients
Sodium carbonate	Low	Low

Bio-accumulative potential

Ingredient	Bio-accumulation
Sodium bicarbonate	LOW (logKOW = 0.4605)
Sodium hexametaphosphate	No data available for all ingredients
Sodium persulphate	No data available for all ingredients
Sodium carbonate	LOW (LogKOW = -0.4605)
Mobility in Soil	
Ingredient	Mobility
Sodium bicarbonate	HIGH (KOC $= 1$)
Sodium hexametaphosphate	No data available for all ingredients
Sodium persulphate	No data available for all ingredients
Sodium carbonate	HIGH (KOC=1)

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste treatment methods

	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)
Product / Packaging disposal	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. Recycle container or dispose of

in an authorised landfill.
Consult State Land Waste Management Authority for further information.

SECTION 14 – DISPOSAL CONSIDERATIONS

Labels required			
Ingredient	Marine Pollutant	HAZCHEM	Label
Sodium bicarbonate	NO	Not applicable	
Sodium hexametaphosphate	NO	Not applicable	
Sodium carbonate	NO	Not applicable	
Sodium persulphate 98% only	NO	1Z	DEDEZING AGENT 5.1
YMFAB HIHO SOLUTION	NO	NOT APPLICABLE	

Sodium bicarbonate, Sodium hexametaphosphate,

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS Transport in bulk according to Annex II of MARPOL and the IBC code - Not Applicable

Sodium persulphate

1 1		-	
UN number	1505		
UN proper shipping name			
	SODIUM PERSULPHATE		
Transport hazard class(es)			
	Class 5.1		
	Sub risk Not Applicable		
Packing Group	III		
Environmental hazard	Not Applicable		
Special precautions for user			
	Special		
	provisions Not Applicable Limited quantity 5 kg		
		1	

Air transport (ICAO-IATA/DGR)

UN number	1505
UN proper shipping name	
	SODIUM PERSULPHATE
Transport hazard class(es)	ICAO/IATA Class 5.1
	ICAO/IATA Sub risk Not Applicable
Packing Group	III
Environmental hazard	Not Applicable
Special precautions for user	Special provisions Not Applicable
	Cargo Only Packing Instructions = 563
	Cargo Only Maximum Qty / Pack = 100 kg Passenger and Cargo Packing Instructions = 559
	Passenger and Cargo Maximum Qty / Pack =25 kg Passenger and Cargo Limited Quantity Packing Instructions = Y546 Passenger and Cargo Limited Maxi Qty /Pack =10 kg

Sea transport (IMDG-Code / GGBVSee)	
number	1505
UN proper shipping name	
	SODIUM PERSULPHATE
Transport hazard class(es)	IMDG Class 5.1
	IMDG Sub risk Not Applicable
Packing Group	III
Environmental hazard	Not Applicable
Special precautions for user	EMS Number F-A, S-Q
	Special provisions Not Applicable

			Limited	d Quantities 5 kg	
_	 	 			

 $\label{eq:conditional} Transport \ in \ bulk \ according \ to \ Annex \ 11 \ of \ MARPOL \ and \ the \ IBC \ code \ - \ Not \ applicable$

Sodium carbonate

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

SOURCE	PRODUCT NAME	POLLUTION	SHIP TYPE
IMO MARPOL (Annex II)	Sodium carbonate solution	Z	3
- List of Noxious Eiquid Substances Carried in Burk			

SECTION 15 – REGULATORY INFORMATION

Safety, Health and Environmental regulations / legislation specific for the substance and/or mixture

SODIUM BICARBONATE(144-55-8), SODIUM HEXAMETAPHOSPHATE (10124-56-8) are found on the following regulatory lists:-

Australia Inventory of Chemical Substances (AICS)

SODIUM PERSULPHATE (7775-27-1), SODIUM CARBONATE(497-19-8) are found on the following regulatory lists:-

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Υ
Canada - DSL	Υ
Canada - NDSL	N (sodium persulfate), N (sodium hexametaphosphate), N (sodium bicarbonate), N (sodium carbonate)
China - IECSC	Υ
Europe - EINEC / ELINCS / NLP	Υ
Japan - ENCS	Υ
Korea - KECI	Υ
New Zealand - NZIoC	Υ
Philippines - PICCS	Υ
USA - TSCA	Υ
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)

SECTION 16 – OTHER INFORMATION

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

- IDLH: Immediately Dangerous to Life or Health Concentrations
- OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: Bio Concentration Factors BEI: Biological Exposure Index

BEI : Biological exposure Index

Disclaimer:

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Please note this produce is a blended product and does not take into the 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.

This information is drawn from recognized sources believed to be reliable. Wobelea Pty Ltd makes no guarantees or assumes any liability in connection

with this information. 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.

Contact Person/Author	Sarah Bliss
Title	Director
Email	sarah@wobelea.com.au
Phone:	03 5940 1077
Email Phone:	sarah@wobelea.com.au 03 5940 1077
