

**Novachem Pty Ltd** 

Chemwatch Hazard Alert Code: 4

## Version No: 1.1

Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

Issue Date: 21/04/2024 Print Date: 21/04/2024 S.GHS.AUS.EN

## SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### **Product Identifier**

Product name	Baeocystin
Synonyms	Not Available
Proper shipping name	ACETONITRILE
Other means of identification	B-102

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Lat	poratory chemicals, Synthesis of substances
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## Details of the manufacturer or supplier of the safety data sheet

Registered company name	Novachem Pty Ltd	Novachem Pty Ltd
Address	25 Crissane Road, Heidelberg West Victoria 3081 Australia	25 Crissane Road, Heidelberg West Victoria 3081 Australia
Telephone	+61384151255	+61384151255
Fax	+61386250088	+61386250088
Website	www.novachem.com.au	www.novachem.com.au
Email	novachem@novachem.com.au	novachem@novachem.com.au

#### Emergency telephone number

Association / Organisation	Victorian Poisons Information Centre	Victorian Poisons Information Centre
Emergency telephone numbers	13 11 26	13 11 26
Other emergency telephone numbers	Not Available	Not Available

## **SECTION 2 Hazards identification**

#### Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification <sup>[1]</sup>	Flammable Liquids Category 2, Acute Toxicity (Oral) Category 4, Serious Eye Damage/Eye Irritation Category 2A
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements



Signal word

Danger

## Hazard statement(s)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.

#### Precautionary statement(s) Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233	Keep container tightly closed.	
P240	Ground and bond container and receiving equipment.	
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.	
Precautionary statement(s) Response		
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.	

## Precautionary statement(s) Storage

P403+P235 Store in a well-ventilated place. Keep cool.

## Precautionary statement(s) Disposal

P501

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

## **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

## Mixtures

CAS No	%[weight]	Name
75-05-8	>=30-<50	acetonitrile
7732-18-5	>=30-<50	water
21420-58-6	0.1	baeocystin
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available	

#### **SECTION 4 First aid measures**

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>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.</li> <li>Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>Transport to hospital or doctor without delay.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin or hair contact occurs:</li> <li>Quickly but gently, wipe material off skin with a dry, clean cloth.</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>Transport to hospital, or doctor.</li> </ul>
Inhalation	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>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.</li> <li>Transport to hospital, or doctor, without delay.</li> </ul>
Ingestion	<ul> <li>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</li> <li>For advice, contact a Poisons Information Centre or a doctor.</li> <li>Urgent hospital treatment is likely to be needed.</li> <li>In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>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.</li> <li>If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.</li> <li>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</li> <li>INDUCE vomiting 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.</li> <li>NOTE: Wear a protective glove when inducing vomiting by mechanical means.</li> </ul>

## Indication of any immediate medical attention and special treatment needed

In the use of psychoactive substances, four recognised chronic reactions have been reported

- Prolonged psychotic reactions
- Depression sufficiently severe to be life-threatening

#### Flashbacks

Exacerbation of pre-existing psychiatric illness

Some persons who have experienced many psychedelic trips, especially those who have had acute adverse reactions, develop what appears to be serious long-term personality disruption.

These prolonged psychotic reactions have similarities to schizophrenic reactions and appear to occur most often in persons with pre-existing psychological difficulties - primarily pre-psychotic or psychotic personalities.

Psychedelic-induced personality disorders can be severe and prolonged.

Appropriate treatment often requires antipsychotic medication (antipsychotics, neuroleptics, major tranquillisers) and residential care in a mental health facility.

In certain cases, psychedelic-induced chronic psychological problems lead to complicated patterns of polydrug abuse that requires additional treatment approaches. Note:

Antipsychotics are associated with a range of side effects. It is well-recognized that many people stop taking them (around two-thirds even in controlled drug trials) due in part to adverse effects.

Notable and relatively common adverse effects of antipsychotics include extrapyramidal symptoms (which involve motor control) and hyperprolactinaemia primarily in typical's and weight gain and metabolic abnormalities mostly in atypicals. Temporary withdrawal symptoms including insomnia, agitation, psychosis, and motor disorders may occur during dosage reduction of antipsychotics, and can be mistaken for the return of the underlying condition.

Many psychoactives are also monoamine oxidase inhibitors (MAOIs):

Special care should be taken with any drug therapy in view of the many hazards of monoamine oxidase inhibitor interactions. In particular metaraminol and other sympathomimetic agents are not suitable for the treatment of hypotension, which should be managed with intravenous fluids and, in severe shock, intravenous hydrocortisone Treat symptomatically.

• Triptans (tryptamines) have a wide variety of pharmacokinetic properties. Bioavailability is between 14% and 70%, biological half-life (T1/2) is between 2 and 26 hours. Their good ability to cross the blood-brain barrier and the rather long half life of some triptans may result in lower frequencies of migraine recurrence.

As with other 5-HT1 agonists, sensations of tightness, pain, pressure, and heaviness in the precordium, throat, neck, and jaw have been reported after treatment with triptans.
 Because 5-HT1 agonists may cause coronary vasospasm, patients who experience signs or symptoms suggestive of angina following dosing should be evaluated for the presence of CAD or a predisposition to Prinzmetal s variant angina before receiving additional doses of medication, and should be monitored electrocardiographically if dosing is resumed and similar symptoms occur. Patients shown to have CAD and those with Prinzmetal s variant angina should not receive 5-HT1 agonists

• Cerebral haemorrhage, subarachnoid haemorrhage, stroke, and other cerebrovascular events have been reported in patients treated with other triptans and some events have resulted in fatalities. In a number of cases, it appeared possible that the cerebrovascular events were primary, the triptan having been administered in the incorrect belief that the symptoms experienced were a consequence of migraine, when they were not. As with other acute migraine therapies, before treating headaches in patients not previously diagnosed as migraineurs and in migraineurs who present with atypical symptoms, care should be taken to exclude other potentially serious neurological conditions. It should be noted that patients with migraine may be at increased risk of certain cerebrovascular events (e.g., stroke, haemorrhage, and transient ischemic attack.

• Triptans may cause vasospastic reactions other than coronary artery vasospasm, such as peripheral and gastrointestinal vascular ischemia with abdominal pain and bloody diarrhoea. Very rare reports of transient and permanent blindness and significant partial vision loss have been reported with the use of triptans. Visual disorders may also be part of a migraine attack. Patients who experience symptoms or signs suggestive of decreased arterial flow following the use of any triptan, such as ischemic bowel syndrome or Raynaud s syndrome, are candidates for further evaluation.

• Overuse of acute migraine drugs (e.g. ergotamine, triptans, opioids, or combination of these drugs for 10 or more days per month) may lead to exacerbation of headache (medication overuse headache). Medication overuse headache may present as migraine-like daily headaches or as a marked increase in frequency of migraine attacks. Detoxification of patients, including withdrawal of the overused acute migraine drugs and treatment of withdrawal symptoms (which often includes a transient worsening of headache) may be necessary.

For cyanide intoxication (and for certain nitriles which produce cyanide ion)

- Signs symptoms of acute cyanide poisoning reflect cellular hypoxia and are often non-specific.
- Cyanosis may be a late finding.
- A bradycardic, hypertensive and tachypneic patient suggests poisoning especially if CNS and cardiovascular depression subsequently occurs.
- Immediate attention should be directed towards assisted ventilation, administration of 100% oxygen, insertion of intravenous lines and institution of cardiac monitoring.
- Obtain an arterial blood gas immediately and correct any severe metabolic acidosis (pH below 7.15).
- Mildly symptomatic patients generally require supportive care alone. Nitrites should not be given indiscriminately in all cases of moderate to severe poisoning, they should be given in conjunction with thiosulfate. As a temporizing measure supply amyl nitrite perles (0.2ml inhaled 30 seconds every minute) until intravenous lines for sodium nitrite are established. 10 ml of a 3% solution is administered over 4 minutes to produce 20% methaemoglobin in adults. Follow directly with 50 ml of 25% sodium thiosulfate, at the same rate, IV. If symptoms reappear or persist within 1/2-1 hour, repeat nitrite and thiosulfate at 50% of initial dose. As the mode of action involves the metabolic conversion of the thiosulfate to thiocyanate, renal failure may enhance thiocyanate toxicity.
- Methylene blue is not an antidote. [Ellenhorn and Barceloux: Medical Toxicology]

If amyl nitrite intervention is employed then Medical Treatment Kits should contain the following:

- One box containing one dozen amyl nitrite ampoules
- Two sterile ampoules of sodium nitrite solution (10 mL of a 3% solution in each)
- Two sterile ampoules of sodium thiosulfate solution (50 mL of a 25% solution in each)
- One 10 mL sterile syringe. One 50 mL sterile syringe. Two sterile intravenous needles. One tourniquet.
- One dozen gauze pads.
- Latex gloves
- A 'Biohazard' bag for disposal of bloody/contaminated equipment.
- A set of cyanide instructions on first aid and medical treatment.

- Notes on the use of amyl nitrite:-

- AN is highly volatile and flammable do not smoke or use around a source of ignition.
- If treating patient in a windy or draughty area provide some shelter or protection (shirt, wall, drum, cupped hand etc.) to prevent amyl nitrite vapour from being blown away. Keep ampoule upwind from the nose, the objective is to get amyl nitrite into the patients lungs.
- Rescuers should avoid AN inhalation to avoid becoming dizzy and losing competence.
- Lay the patient down. Since AN dilates blood vessels and lowers blood pressure, lying down will help keep patient conscious.
- DO NOT overuse excessive use might put the patient into shock. Experience at DuPont plants has not shown any serious after-effects from treatment with amyl nitrite.

#### ADDITIONAL NOTES:

Major medical treatment procedures may vary e.g. US (FDA method as recommended by DuPont) uses amyl nitrite as a methaemoglobin generator, followed by treatment with sodium nitrite and then sodium thiosulfate.

**MODES OF ACTION:** Amyl nitrite (AN) reacts with haemoglobin (HB) to form about 5% methaemoglobin (MHB). Sodium nitrite (NaNO2) reacts with haemoglobin to form approximately 20-30% methaemoglobin. Methaemoglobin attracts cyanide ions (CN) from tissue and binds with them to become cyanmethaemoglobin (CNMHB). Sodium thiosulfate (Na2S2O3) converts cyanmethaemoglobin to thiocyanate (HSCN) which is excreted by the kidneys. i.e. AN + HB = MHB NaNO2 + HB = MHB CN + MHB = CNMHB Na2S2O3 + CNMHB + O2 = HSCN

- The administration of the antidote salts is intravenous in normal saline, Ringers lactate or other available IV fluid.
- European practice may use 4-dimethylaminophenol (DMAP) as a methaemoglobin generator. Also hydroxycobalamin (Vitamin B12a) is used. Hydroxycobalamin works by reacting with cyanide to form cyanocobalamin (Vitamin B12) which is excreted in the urine.
- European and Australian NOHSC (ASCC) propose dicobalt edetate (Kelocyanor) as antidote. This acts by chelating cyanide to form stable cobalticyanide, which is excreted in the urine. In all cases hyperbaric therapy may increase the efficiency of a cyanide antidote kit.

#### For psilocin intoxication:

- Administer Ipecac syrup or perform gastric lavage, if possible within 30 minutes of the ingestion.
- In most cases the intoxication is so mild and brief that no specific medical treatment is needed. Children should be observed carefully for fever, coma and convulsions.
- A frightened victim may require only reassurance. A confused or disoriented person may sometimes be managed by simple 'talk-down' techniques as in marijuana poisoning.
- Diazepam and particularly, the antipsychotic tranquilisers (e.g. chlorpromazine and haloperidol) may suppress all potent effects of psilocybin and psilocin.

GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, 5th Ed.

## **SECTION 5 Firefighting measures**

## Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
Advice for firefighters	
Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Liquid and vapour are highly flammable.</li> <li>Severe fire hazard when exposed to heat, flame and/or oxidisers.</li> <li>Vapour may travel a considerable distance to source of ignition.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>Combustion products include:</li> <li>carbon dioxide (CO2)</li> <li>nitrogen oxides (NOx)</li> <li>other pyrolysis products typical of burning organic material.</li> <li>May emit poisonous fumes.</li> </ul>
HAZCHEM	•2YE

## **SECTION 6 Accidental release measures**

## Personal precautions, protective equipment and emergency procedures

See section 8

## **Environmental precautions**

See section 12

## Methods and material for containment and cleaning up

Minor Spills	<ul> <li>Environmental hazard - contain spillage.</li> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> </ul>
Major Spills	Environmental hazard - contain spillage. <b>DO NOT</b> touch the spill material For alkyl nitriles: For residue: Add alkaline hypochlorite solution to spill to produce cyanate. Neutralise liquid, and absorb with sawdust. Collect solid residues and seal in drums for disposal. Wash spill area with large quantities of water.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## **SECTION 7 Handling and storage**

Precautions for safe handling	
Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> </ul>
Other information	<ul> <li>NOTE: Special security requirements may be mandated under Federal/State Regulation(s).</li> <li>Store in original containers.</li> <li>Store in vault fitted with warning devices or detectors recommended by various Federal/State authorities.</li> <li>Store in vault used only for the purpose of storage of drugs of addiction.</li> </ul>

## Conditions for safe storage, including any incompatibilities

- Packaging as recommended by manufacturer.
- Check that containers are clearly labelled.
- Tamper-proof containers.

	<ul> <li>Polyethylene or polypropylene containers.</li> <li>Glass container is suitable for laboratory quantities</li> <li>For low viscosity materials</li> <li>Drums and jerricans must be of the non-removable head type.</li> <li>Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> <li>For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.):</li> <li>Removable head packaging;</li> <li>Cans with friction closures and</li> <li>low pressure tubes and cartridges may be used.</li> </ul>
	All inner and sole packagings for substances that have been assigned to Packaging Groups I or II on the basis of inhalation toxicity criteria, must be hermetically sealed.
Storage incompatibility	<ul> <li>Acetonitrile <ul> <li>forms cyanide gas on contact with steam</li> <li>reacts violently with oxidisers such as chlorine, bromine, fluorine; with chlorosulfonic acid, oleum or sulfuric acid</li> <li>is incompatible with water (especially if acid or alkaline), acids, caustics, nitrating agents, indium, nitrogen tetroxide , sulfur trioxide, iron(III) salts of perchlorate, nitrogen fluoride compounds</li> <li>attacks most rubber and plastics</li> <li>may accumulate electrical charges, causing ignition of vapours</li> <li>Contact with acids produces toxic furmes</li> <li>Nitriles may polymerise in the presence of metals and some metal compounds.</li> <li>They are incompatible with acids; mixing nitriles with strong oxidising acids can lead to extremely violent reactions.</li> <li>Nitriles are generally incompatible with other oxidising agents such as peroxides and epoxides.</li> <li>The combination of bases and nitriles can produce hydrogen cyanide.</li> <li>The constinut cyano group is endothermic and many organic nitriles are reactive under certain conditions; N-cyano derivatives are reactive or unstable.</li> <li>The majority of endothermic compounds are thermodynamically unstable and may decompose explosively under various circumstances of initiation.</li> <li>Many but not all endothermic compounds have been involved in decompositions, reactions and explosions and, in general, compounds with significantly positive values of standard heats of formation, may be considered suspect on stability grounds.</li> </ul> </li> <li>BRETHERICK L: Handbook of Reactive Chemical Hazards <ul> <li>May decompose violently or explosively on contact with other substances.</li> <li>The majority of endothermic compounds are thermodynamically unstable and may decompose explosively under various circumstances absorbed into the component, is one of the relatively few compounds which are described as 'endothermic' i.e. heat is absorbed into the components, is one of the relatively few compounds which are described as 'endothermic</li></ul></li></ul>

## SECTION 8 Exposure controls / personal protection

## **Control parameters**

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TW	A	STEL		Peak	Notes
Australia Exposure Standards	acetonitrile	Acetonitrile	40	ppm / 67 mg/m3	101 mg/m3 / 60 ppm		Not Available	Not Available
Emergency Limits								
Ingredient	TEEL-1			TEEL-2		TE	EL-3	
acetonitrile	Not Available			Not Available		No	t Available	
Ingredient	Original IDLH				Revised IDLH			
acetonitrile	500 ppm	500 ppm			137 ppm			
water	Not Available	Not Available			Not Available			
baeocystin	Not Available				Not Available			

## Exposure controls

<ul> <li>Appropriate engineering controls</li> <li>For potent pharmacological agents: Solutions Handling:         <ul> <li>Solutions Can be handled outside a containment system or without local exhaust vaerosolisation. If the procedures have a potential for aerosolisation, an air-purifying immediate area.</li> <li>Solutions used for procedures where aerosolisation may occur (e.g., vortexing, put or with local exhaust ventilation.</li> <li>In situations where this is not feasible (may include animal dosing), an air-purifying immediate area.</li> </ul> </li> <li>Unless written procedures, specific to the workplace are available, the following</li> <li>For Laboratory-scale handling of Substances assessed to be toxic by inhala in Class II biological safety cabinets *; <i>Quantities of 25 grams to 1 kilogram</i> may equivalent containment systems; <i>Quantities exceeding 1 kg</i> may be handled eith biological safety cabinet*,</li> <li>HEPA terminated local exhaust ventilation should be considered at point of genera?</li> <li>The need for respiratory protection should also be assessed where incidental or a of contamination, PAPR, full face air purifying devices with P2 or P3 filters or air strained for animation.</li> </ul>	g respirator is to be worn by all personnel in the imping) are to be handled within a containment system g respirator is to be worn by all personnel in the <b>i is intended as a guide:</b> <b>ition.</b> <i>Quantities of up to 25 grams</i> may be handled y be handled in Class II biological safety cabinets* or her using specific containment, a hood or Class II ation of dust, fumes or vapours. ccidental exposure is anticipated. Dependent on levels
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commended material(s)	Respiratory protection
Other protection	<ul> <li>For quantities up to 500 grams a laboratory coat may be suitable.</li> <li>For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs.</li> <li>For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.</li> </ul>
Body protection	See Other protection below
Hands/feet protection	<ul> <li>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 can not be calculated in advance and has therefore to be checked prior to the application.</li> <li>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.</li> <li>Personal hygiene is a key element of effective hand care.</li> <li>Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference.</li> <li>Double gloving should be considered.</li> <li>PVC gloves.</li> <li>for acetonitrile:</li> <li>Butyl rubber, PVAL, Teflon, Saranex, Silvershield, Viton/ chlorobutyl are all highly resistant to permeation</li> </ul>
Skin protection	See Hand protection below
Eye and face protection	<ul> <li>Chemical protective goggles with full seal. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>Shielded mask (gas-type).</li> <li>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.</li> </ul>
Individual protection measures, such as personal protective equipment	

# Recommended material(s) GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

'Forsberg Clothing Performance Index'.

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

Baeocystin

Material	CPI
BUTYL	A
NEOPRENE	В
BUTYL/NEOPRENE	С
CPE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NITRILE	С
PE/EVAL/PE	С
PVA	С
SARANEX-23	С
TEFLON	С
VITON	С
VITON/NEOPRENE	С

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

 $\ensuremath{\text{NOTE}}$  As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as 'feel' or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

#### **SECTION 9** Physical and chemical properties

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the 'Exposure Standard' (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001,

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	A-AUS / Class 1	-	A-PAPR-AUS / Class 1
up to 25 x ES	Air-line*	A-2	A-PAPR-2
up to 50 x ES	-	A-3	-
50+ x ES	-	Air-line**	-

^ - Full-face

ANSI Z88 or national equivalent)

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)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Information on basic physical and chemical properties				
Appearance	Not Available			
Physical state	Liquid	Relative density (Water = 1)	Not Available	
Odour	Not Available	Partition coefficient n-octanol / water	Not Available	

		Auto-ignition temperature	
Odour threshold	Not Available	(°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	8	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	<ul> <li>Presence of elevated temperatures.</li> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## **SECTION 11 Toxicological information**

## Information on toxicological effects

Inhaled	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects. The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. There is strong evidence to suggest that this material can cause, if inhaled once, serious, irreversible damage of organs. The smell of acetonitrile does not give enough warning of exposure. The gas is highly toxic, and inhaling it can cause loss of consciousness. There is strong evidence to suggest that this material, on a single contact with skin, can cause serious, irreversible damage of organs.
Ingestion	Severely toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 5 gram may be fatal or may produce serious damage to the health of the individual. Strong evidence exists that exposure to the material may cause irreversible damage (other than cancer, mutations and birth defects) following a single exposure by swallowing. Nitrile poisoning exhibits similar symptoms to poisoning due to hydrogen cyanide. The substances irritate the eyes and skin, and are absorbed quickly and completely through the skin. Psychotomimetic agents may produce nausea, vomiting, sweating, headache, high blood pressure, rapid heart beat, tremors and incoordination. High doses may slow the heart rate. Cyanide poisoning can cause increased saliva output, nausea without vomiting, anxiety, confusion, vertigo, dizziness, stiffness of the lower jaw, convulsions, spasm, paralysis, coma and irregular heartbeat, and stimulation of breathing followed by failure. Often the skin becomes cyanosed (blue-grey), and this is often delayed.
Skin Contact	There is strong evidence to suggest that this material, on a single contact with skin, can cause serious, irreversible damage of organs. The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal exposures. 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. Skin contact with the material may produce toxic effects; systemic effects may result following absorption.
Eye	There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Chronic exposure to cyanides and certain nitriles may result in interference to iodine uptake by thyroid gland and its consequent enlargement. This occurs following metabolic conversion of the cyanide moiety to thiocyanate.

	Baeocystin				
Baeocystin	Sustained use of some substances may cause psychologic to disrupt. Psychoactive drugs work by temporarily affecting a per thinking, perception and behaviour. There are many we nerve transmitters. Repeated use of psychotomimetic substances may pr self-image. This may be spontaneous and occur many <b>TOXICITY</b> Not Available	rrson s chemistry within the nerv ays in which psychoactive drugs oduce flashback with hallucinatio	ous system. This causes changes in a person s moor can affect the brain; each drug works on one or mor		
	ΤΟΧΙΟΙΤΥ	IRRITATIO	N		
	Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit	):20 mg (open)-SEVERE		
acetonitrile	Inhalation(Rabbit) LC50; 2828 ppm4h <sup>[2]</sup>	Skin (rabbi	t):500 mg (open)-mild		
	Oral (Rabbit) LD50; 50 mg/kg <sup>[2]</sup>				
water	ΤΟΧΙΟΙΤΥ		IRRITATION		
	Oral (Rat) LD50: >90000 mg/kg <sup>[2]</sup>		Not Available		
		İ			
baeocystin	TOXICITY IRRITATION				
	Not Available Not Available				
Legend:	<ol> <li>Value obtained from Europe ECHA Registered Sub specified data extracted from RTECS - Register of To.</li> </ol>				
Baeocystin	The human 5-HT1B and 5-HT1D receptors are especi 5-HT(1B) and 5-HT(1D) receptors have been pharmack ketanserin, ritanserin and methiothepin, The precise fit hampered by the lack of selective ligands. The blockade of terminal 5-HT1B receptors by selective antidepressant drugs, since the acute blockade of the The function of the 5-HT1B receptor differs depending inhibiting the release of dopamine. In the basal ganglii inhibiting the release of serotonin and decreasing glut	cologically differentiated using no unction of these receptors remain ve antagonists has been propose se 5-HT autoreceptors will, in the upon its location. In the frontal a and the striatum, evidence sug	onselective 5-HT(1B/D) receptor antagonists such a ns undefined, and progress toward this has been ed as an approach for more efficient and/or fast-acti eory, immediately mimic their desensitization. cortex, it is believed to act as a postsynaptic receptor		
ACETONITRILE	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.				
Baeocystin & ACETONITRILE	Absorption of acetonitrile occurs after oral, skin, or inh high enough doses, death can occur quickly from resp salivation, nausea, vomiting, anxiety, confusion, rapid	piratory failure. Lower doses cau	se typical symptoms of cyanide poisoning such as		
WATER & BAEOCYSTIN	No significant acute toxicological data identified in liter	rature search.			
Acute Toxicity	✓	Carcinogenici	ty X		
Skin Irritation/Corrosion	×	Reproductivi			
Serious Eye	~	STOT - Single Exposu			
Damage/Irritation Respiratory or Skin	×	STOT - Repeated Exposu			
sensitisation Mutagenicity	×	Aspiration Haza	rd 🗙		

Legend:

Data either not available or does not fill the criteria for classification
 Data available to make classification

## **SECTION 12 Ecological information**

Baeocystin	Endpoint	Test Duration (hr)		Species	Value		Source	
	Not Available Not Available			Not Available	Not Available	Not Available		Not Available
	Endpoint NOEC(ECx)	Test Duration (hr)	Spec Crust			Value <0.001mg	1/I	Source
acetonitrile	EC50	72h		acea e or other aquatic plants	3	<0.001mg	•	4 2
	EC50	48h	Crus	acea		>1000mg/	/I	2
	LC50	96h	Fish			>100mg/l		2

	Endpoint	Test Duration (hr)	Species	Value	Source
water	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
baeocystin	Not Available	Not Available	Not Available	Not Available	Not Available

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems. Soil Guidelines: Dutch Criteria:

free cyanide: 1 mg/kg (target)

20 mg/kg (intervention)

complex cyanide (pH 5): 5 mg/kg (target)

50 mg/kg (intervention)

Air Quality Standards: no safe guidelines recommended due to carcinogenic properties.

Abiotic Effects: Acetonitrile is a volatile organic compound (VOC) substance, thus it is a contributor to the formation of photochemical smog in the presence of other VOCs. Transport: Acetonitrile is primarily removed by volatilization and leaching into groundwater. It has low adsorption potential to soils. Air - Acetonitrile may persist in the troposphere and can be transported over long distances.

DO NOT discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
acetonitrile	HIGH (Half-life = 360 days)	HIGH (Half-life = 541.29 days)
water	LOW	LOW
Bioaccumulative potential		
Ingredient	Bioaccumulation	
acetonitrile	LOW (BCF = 0.4)	
Mobility in soil		
Ingredient	Mobility	
acetonitrile	LOW (Log KOC = 4.5)	

## **SECTION 13 Disposal considerations**

Waste treatment methods	
Product / Packaging disposal	<ul> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> <li>Otherwise:</li> <li>If container can not 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.</li> <li>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>Valuable substance, hold all residues for recovery. Disposal of the material must be carried out in accordance with the requirements of the relevant Federal/State Act(s) or Code(s) regulating the disposal of Drugs of Addiction.</li> <li>Consult manufacturer/supplier for recycling options.</li> <li>Decontaminate empty containers with water; incinerate plastic bags.</li> <li>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.</li> <li>A Hierarchy of Controls seems to be common - the user should investigate:</li> <li>Reduction</li> <li>Reuse</li> <li>Recycling</li> <li>Disposal (if all else fails)</li> <li>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</li> <li>DO NOT allow wash water from cleaning or process equipment to enter drains.</li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> <li>In all cases disposal to sever may be subject to local laws and regulations and these should be considered first.</li> <li>Where in doubt contact the responsible authority.</li> </ul>

## **SECTION 14 Transport information**

## Labels Required



Marine Pollutant

HAZCHEM	•2YE		
Land transport (ADG)			
14.1. UN number or ID number	1648		
14.2. UN proper shipping name	ACETONITRILE		
14.3. Transport hazard class(es)	Class Subsidiary Hazard	3 Not Applicable	
14.4. Packing group	П		
14.5. Environmental hazard	Not Applicable		
14.6. Special precautions for user	Special provisions	Not Applicable	

## Air transport (ICAO-IATA / DGR)

14.1. UN number	1648					
14.2. UN proper shipping name	Acetonitrile					
14.3. Transport hazard class(es)	ICAO/IATA Class ICAO / IATA Subsidiary Hazard ERG Code	3 Not Applicable 3L				
14.4. Packing group	11	ll				
14.5. Environmental hazard	Not Applicable					
14.6. Special precautions for user	Not Applicable         Special provisions         Cargo Only Packing Instructions         Cargo Only Maximum Qty / Pack         Passenger and Cargo Packing Instructions         Passenger and Cargo Maximum Qty / Pack         Passenger and Cargo Limited Quantity Packing Instructions         Passenger and Cargo Limited Maximum Qty / Pack		Not Applicable           364           60 L           353           5 L           Y341           1 L			

## Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1648				
14.2. UN proper shipping name	ACETONITRILE				
14.3. Transport hazard class(es)	IMDG Class IMDG Subsidiary Haz	3 ard Not Applicable			
14.4. Packing group	II	l			
14.5 Environmental hazard	Not Applicable				
14.6. Special precautions for user	EMS Number Special provisions Limited Quantities	F-E , S-D Not Applicable			

## 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

## 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
acetonitrile	Not Available
water	Not Available
baeocystin	Not Available

## 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
acetonitrile	Not Available
water	Not Available
baeocystin	Not Available

## **SECTION 15 Regulatory information**

## acetonitrile is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australian Inventory of Industrial Chemicals (AIIC)

## water is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

## baeocystin is found on the following regulatory lists

Not Applicable

## Additional Regulatory Information

Not Applicable

#### National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	No (baeocystin)
Canada - DSL	No (baeocystin)
Canada - NDSL	No (acetonitrile; water; baeocystin)
China - IECSC	No (baeocystin)
Europe - EINEC / ELINCS / NLP	No (baeocystin)
Japan - ENCS	No (baeocystin)
Korea - KECI	No (baeocystin)
New Zealand - NZIoC	No (baeocystin)
Philippines - PICCS	No (baeocystin)
USA - TSCA	No (baeocystin)
Taiwan - TCSI	No (baeocystin)
Mexico - INSQ	No (baeocystin)
Vietnam - NCI	No (baeocystin)
Russia - FBEPH	No (baeocystin)
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## **SECTION 16 Other information**

Revision Date	21/04/2024
Initial Date	21/04/2024

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

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.

#### **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
- ES: Exposure Standard
- 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: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
   EINECS: European INventory of Existing Commercial chemical Substances

- ELINCS: European List of Notified Chemical Substances

- ELINCS: European List of Notified Criterian
  NLP: No-Longer Polymers
  ENCS: Existing and New Chemical Substances Inventory
  KECI: Korea Existing Chemicals Inventory
  NZIoC: New Zealand Inventory of Chemicals
  PICCS: Philippine Inventory of Chemicals and Chemical Substances
  TSCA: Toxic Substances Control Act
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
  FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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