

Cape Sundew/Venus Flytrap Multiplication Basal Medium **Apollo Scientific**

Chemwatch Hazard Alert Code: 2

Issue Date: 15/05/2022 Print Date: 01/08/2023 S.REACH.GBR.EN

Version No: 1.1 Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)

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

1.1. Product Identifier

Part Number: PMC206B

Product name	Cape Sundew/Venus Flytrap Multiplication Basal Medium
Chemical Name	Not Applicable
Synonyms	Not Available
Proper shipping name	NITRATES, INORGANIC, N.O.S.
Chemical formula	Not Applicable
Other means of identification	Not Available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Not Available	
Uses advised against	No specific uses advised against are identified.	

1.3. Details of the manufacturer or supplier of the safety data sheet

Registered company name	Apollo Scientific			
Address	Whitefield Road, Bredbury SK62QR United Kingdom			
Telephone	01614060505			
Fax	0161 406 0506			
Website	http://www.apolloscientific.co.uk/			
Email	sales@apolloscientific.co.uk			

1.4. Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments ^[1]	H335 - Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, H315 - Skin Corrosion/Irritation Category 2, H319 - Serious Eye Damage/Eye Irritation Category 2, H272 - Oxidizing Solids Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

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2.2. Label elements

Hazard pictogram(s)





Signal word

Danger

Hazard statement(s)

H335	May cause respiratory irritation.		
H315	Causes skin irritation.		
H319	Causes serious eye irritation.		
H272	May intensify fire; oxidiser.		

Supplementary statement(s)

EUH031

Contact with acids liberates toxic gas.

Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.		
P271	Use only outdoors or in a well-ventilated area.		
P220	Keep away from clothing and other combustible materials.		
P261	Avoid breathing dust/fumes.		
P280	Wear protective gloves, protective clothing, eye protection and face protection.		
P264	Wash all exposed external body areas thoroughly after handling.		

Precautionary statement(s) Response

P370+P378	In case of fire: Use 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.			
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.			
P337+P313	If eye irritation persists: Get medical advice/attention.			
P302+P352	IF ON SKIN: Wash with plenty of water.			
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.			
P332+P313	If skin irritation occurs: Get medical advice/attention.			
P362+P364	Take off contaminated clothing and wash it before reuse.			

Precautionary statement(s) Storage

P405	Store locked up.	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

2.3. Other hazards

May produce discomfort of the respiratory system and skin*.

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

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1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
Not Available	100	Cape Sundew/Venus Flytrap Multiplication Basal Medium	Not Applicable	Not Applicable	Not Available
Legend:	Legend: 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties				

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: • Wash out immediately with fresh running water. • 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 attention. • Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.	
Skin Contact	If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.	
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. 	
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. 	

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methaemoglobin.

- Most produce a peak effect within 30 minutes.
- Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methaemoglobin.
- Initial attention should be directed towards improving oxygen delivery, with assisted ventilation, if necessary. Hyperbaric oxygen has not demonstrated
- Institute cardiac monitoring, especially in patients with coronary artery or pulmonary disease.
- Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- ▶ Naloxone, glucose and thiamine should be given if a multiple ingestion is suspected.
- ▶ Decontaminate using Ipecac Syrup for alert patients or lavage for obtunded patients who present within 2-4 hours of ingestion.
- Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue. (Cyanosis alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 5 minutes; repeat, using the same dose if symptoms of hypoxia fail to subside within 1 hour.

[Ellenhorn and Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV): Determinant Index Sampling Time Comments B,NS,SQ 1. Methaemoglobin in blood 1.5% of haemoglobin During or end of shift

- B: Background levels occur in specimens collected from subjects NOT exposed
- NS: Non-specific determinant; also observed after exposure to other materials
- SQ: Semi-quantitative determinant Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

SECTION 5 Firefighting measures

5.1. Extinguishing media

FOR SMALL FIRE:

- ▶ USE FLOODING QUANTITIES OF WATER.
- DO NOT use dry chemical, CO2, foam or halogenated-type extinguishers.

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FOR LARGE FIRE

Flood fire area with water from a protected position

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility

- Avoid storage with reducing agents.
- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous

5.3. Advice for firefighters

Fire Fighting

- Will not burn but increases intensity of fire.
- ▶ Heating may cause expansion or decomposition leading to violent rupture of containers.
- Heat affected containers remain hazardous. Fire/Explosion Hazard
 - Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.
 - May emit irritating, poisonous or corrosive fumes.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

► Clean up all spills immediately.

- ▶ No smoking, naked lights, ignition sources.
- · Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as
- Avoid breathing dust or vapours and all contact with skin and eyes. Minor Spills
 - Control personal contact with the substance, by using protective equipment.
 - ▶ Contain and absorb spill with dry sand, earth, inert material or vermiculite.
 - DO NOT use sawdust as fire may result
 - Scoop up solid residues and seal in labelled drums for disposal.
 - ► Neutralise/decontaminate area.
 - Clear area of personnel and move upwind.
 - Alert Fire Brigade and tell them location and nature of hazard.
 - May be violently or explosively reactive.
 - Wear full body protective clothing with breathing apparatus.
 - Prevent, by any means available, spillage from entering drains or water course.
 - ► Consider evacuation (or protect in place).
 - No smoking, flames or ignition sources.
 - Increase ventilation.
 - Contain spill with sand, earth or other clean, inert materials.
 - NEVER use organic absorbents such as sawdust, paper, cloth; as fire may result.
 - Avoid any contamination by organic matter.
 - Use spark-free and explosion-proof equipment.
 - Collect any recoverable product into labelled containers for possible recycling.
 - DO NOT mix fresh with recovered material
 - ▶ Collect residues and seal in labelled drums for disposal.
 - Wash area and prevent runoff into drains.
 - ▶ Decontaminate equipment and launder all protective clothing before storage and re-use.
 - If contamination of drains or waterways occurs advise emergency services.

6.4. Reference to other sections

Major Spills

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

SECTION 7 Handling and storage

7.1. Precautions for safe handling

For oxidisers, including peroxides,

· Avoid personal contact and inhalation of dust, mist or vapours. Safe handling Provide adequate ventilation.

· Always wear protective equipment and wash off any spillage from clothing.

Continued...

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- · Keep material away from light, heat, flammables or combustibles.
- · Keep cool, dry and away from incompatible materials.
- · Avoid physical damage to containers.
- · DO NOT repack or return unused portions to original containers. Withdraw only sufficient amounts for immediate use.
- · Use only minimum quantity required.
- · Avoid using solutions of peroxides in volatile solvents. Solvent evaporation should be controlled to avoid dangerous concentration of the peroxide.
- · Do NOT allow oxidisers to contact iron or compounds of iron, cobalt, or copper, metal oxide salts, acids or bases.
- · Do NOT use metal spatulas to handle oxidisers
- \cdot Do NOT use glass containers with screw cap lids or glass stoppers.
- · Store peroxides at the lowest possible temperature, consistent with their solubility and freezing point.
- · CAUTION: Do NOT store liquids or solutions of peroxides at a temperature below that at which the oxidiser freezes or precipitates. Peroxides, in particular, in this form are extremely shock and heat-sensitive. Refrigerated storage of peroxides must ONLY be in explosion-proof units.
- · The hazards and consequences of fires and explosions during synthesis and use of oxidisers is widely recognised; spontaneous or induced decomposition may culminate in a variety of ways, ranging from moderate gassing to spontaneous ignition or explosion. The heat released from spontaneous decomposition of an energy-rich compound causes a rise in the surrounding temperature; the temperature will rise until thermal balance is established or until the material heats to
- · The most effective means for minimising the consequences of an accident is to limit quantities to a practical minimum. Even gram-scale explosions can be serious. Once ignited the burning of peroxides cannot be controlled and the area should be
- · Unless there is compelling reason to do otherwise, peroxide concentration should be limited to 10% (or less with vigorous reactants). Peroxide concentration is rarely as high as 1% in the reaction mixture of polymerisation or other free-radical reactions,
- · Oxidisers should be added slowly and cautiously to the reaction medium. This should be completed prior to heating and with
- · Addition oxidisers to the hot monomer is extremely dangerous. A violent reaction (e.g., fire or explosion) can result from inadvertent mixing of promoters (frequently used with peroxides in polymerisation systems) with full-strength oxidisers
- · Organic peroxides are very sensitive to contamination (especially heavy-metal compounds, metal oxide salts, alkaline materials including amines, strong acids, and many varieties of dust and dirt). This can initiate rapid, uncontrolled decomposition of peroxides and possible generation of intense heat, fire or explosion The consequences of accidental contamination from returning withdrawn material to the storage container can be disastrous.
- · When handling NEVER smoke, eat or drink.
- · Always wash hands with soap and water after handling.
- · Use only good occupational work practice.
- · Observe manufacturer's storage and handling recommendations contained within this MSDS.

Fire and explosion protection

Other information

See section 5

- ▶ Store in original containers.
- ▶ Keep containers securely sealed as supplied.
- Store in a cool, well ventilated area.
- Keep dry.
- ▶ Store under cover and away from sunlight.
- ▶ Store away from flammable or combustible materials, debris and waste. Contact may cause fire or violent reaction.
- Store away from incompatible materials and foodstuff containers.
- DO NOT stack on wooden floors or pallets.
- Protect containers from physical damage.
- Check regularly for leaks.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

In addition, Goods of Class 5.1, packing group II should be:

- stored in piles so that
- the height of the pile does not exceed 1 metre
- the maximum quantity in a pile or building does not exceed 1000 tonnes unless the area is provided with automatic fire extinguishers
- the maximum height of a pile does not exceed 3 metres where the room is provided with automatic fire extinguishers or 2 meters if not.
- the minimum distance between piles is not less than 2 metres where the room is provided with automatic fire extinguishers or 3 meters if not
- the minimum distance to walls is not less than 1 metre.

7.2. Conditions for safe storage, including any incompatibilities

▶ DO NOT repack. Use containers supplied by manufacturer only.

For low viscosity materials

Drums and jerricans must be of the non-removable head type.

For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids:

▶ Where a can is to be used as an inner package, the can must have a screwed enclosure.

Suitable container

- ► Removable head packaging and
- cans with friction closures may be used.

Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in

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contact with inner and outer packages *. In addition, where inner packagings are glass and contain liquids of packing group I and II there must be sufficient inert absorbent to absorb any spillage *. * unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic. Contact with acids produces toxic fumes Inorganic peroxy compounds are potent oxidisers that pose fire or explosive hazards when in contact with ordinary combustible materials. Inorganic peroxides react with organic compounds to generate organic peroxide and hydroperoxide products that react violently with reducing agents. Inorganic oxidising agents can react with reducing agents to generate heat and products that may be gaseous (causing pressurization of closed containers). The products may themselves be capable of further reactions (such as combustion in Organic compounds in general have some reducing power and can in principle react with compounds in this class. Actual reactivity varies greatly with the identity of the organic compound. Inorganic oxidising agents can react violently with active metals, cyanides, esters, and thiocyanates. Peroxides, in contact with inorganic cobalt and copper compounds, iron and iron compounds, acetone, metal oxide salts and acids and bases can react with rapid, uncontrolled decomposition, leading to fires and explosions. Inorganic reducing agents react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive. Their reactions with oxidizing agents may be violent. Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic Storage incompatibility and examples of so-called redox reactions. for metal nitrates: Segregate from heavy metals, phosphides, sodium acetate, lead nitrate, tartrates, trichloroethylene, Avoid shock and heat. Mixtures of metal nitrates with alkyl esters may explode due to the formation of unstable alkyl nitrates. Mixtures of a nitrate with phosphorous, tin(II) chloride and other reducing agents may react explosively. Mixtures containing nitrates and organic materials are potentially dangerous, especially if acidic materials or heavy metals are Fibrous organic material, jute, wood and similar cellulosic material can become highly combustible by nitrate impregnation Metal nitrates are incompatible with cyanides, thiocyanates, isothiocyanates and hypophosphites. Avoid reaction with the following which can cause an explosion: barium thiocyanate, boron phosphide, cyanides, sodium hypophosphite, sulfur and charcoal, powdered aluminium or aluminium oxide, sodium thiosulfate. Mixtures of metal nitrates and phosphinates may explode on heating A mixture of aluminium powder, water and metal nitrate may explode due to a self accelerating reaction. Mixtures containing nitrates, nitrites and organic materials are potentially dangerous, especially in the presence of acidic materials and heavy metals ► Store at 2-8°C Hazard categories in accordance with Not Available Regulation (EC) No 1272/2008 **Qualifying quantity** (tonnes) of dangerous substances as referred to Not Available in Article 3(10) for the

7.3. Specific end use(s)

application of

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment	
Not Available	Not Available	Not Available	

^{*} Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Not Available						

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Not Applicable

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Cape Sundew/Venus Flytrap Multiplication Basal Medium	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
Cape Sundew/Venus Flytrap Multiplication Basal Medium	Not Available	Not Available

8.2. Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

Such protection might consist of:

- (a): particle dust respirators, if necessary, combined with an absorption cartridge;
- (b): filter respirators with absorption cartridge or canister of the right type;
- (c): fresh-air hoods or masks.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

8.2.1. Appropriate engineering controls

Type of Contaminant:	Air Speed:
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 4-10 m/s (800-2000 f/min) for extraction of crusher dusts generated 2 metres distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

8.2.2. Individual protection measures, such as personal protective equipment











- ► Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- ▶ Full face shield may be required for supplementary but never for primary protection of eyes.
- 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

Skin protection

Eye and face protection

See Hand protection below

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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.

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.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- · frequency and duration of contact,
- · chemical resistance of glove material,
- · glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use
- · Contaminated gloves should be replaced.

As defined in ASTM F-739-96 in any application, gloves are rated as:

Hands/feet protection

- · Excellent when breakthrough time > 480 min
- · Good when breakthrough time > 20 min
- · Fair when breakthrough time < 20 min
- · Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

- ▶ Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber
- ▶ DO NOT wear cotton or cotton-backed gloves.
- ► **DO NOT** wear leather gloves.
- Promptly hose all spills off leather shoes or boots or ensure that such footwear is protected with PVC over-shoes.

Body protection

See Other protection below

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- Overalls.
- PVC Apron
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- ▶ Ensure there is ready access to a safety shower.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.

Other protection

- 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 an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.

Respiratory protection

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

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1	-	PAPR-P1
up to 10 x 23	Air-line*	-	-
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-

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PAPR-P3 100+ x ES Air-line**

* - 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 measurement data, 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 be government 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 complete respiratory protection program.
- · Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- · Use approved positive flow mask if significant quantities of dust becomes airborne.
- · Try to avoid creating dust conditions.

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	White-pale yellow		
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 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)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
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
Nanoform Solubility	Not Available	Nanoform Particle Characteristics	Not Available
Particle Size	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity See section 7.2 Part Number: **PMC206B** Version No: **1.1**

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10.2. Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable under normal handling conditions. Prolonged exposure to heat. Hazardous polymerisation will not occur.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 Information on toxicological effects

	The material is not thought to produce adverse he		
	using animal models). Nevertheless, good hygiene measures be used in an occupational setting.	e practice requires that exposu	re be kept to a minimum and that suitable cont
Inhaled	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 syste		amage has been sustained, proper screenings
	should be conducted on individuals who may be e exposures.	exposed to further risk if handlin	g and use of the material result in excessive
	The main concern with exposure to inorganic nitra relatively harmless, but where bacteria are presen	•	
	converted to nitrite. The main sites of this reaction infection) may also be of some toxicological impor	are the mouth and stomach, b	
	Adults have tolerated large doses of sodium nitrat in some cases repeated for several days for media	cal or experimental purposes, v	vith only minor effects in some subjects (slight
	amount of methaemoglobin in the blood, diarrhea associated with doses greater than 10 grams of ni	- :	
	150 milligrams of nitrate ion per kilogram body we impairing delivery of oxygen to the tissues. This is		-
	The half-life in the body for an oral dose of nitrate		, ,
Ingestion	The material has NOT been classified by EC Director of the lack of corroborating animal or human evidence.	ctives or other classification sys	-
	The substance and/or its metabolites may bind to		uptake of oxygen. This condition, known as
	"methaemoglobinemia", is a form of oxygen starva		a) and benefit in the Country of the
	Symptoms include cyanosis (a bluish discolouration be evident until several hours after exposure.	on skin and mucous membrane	s) and breathing difficulties. Symptoms may no
	At about 15% concentration of blood methaemogle	obin there is observable cyano	sis of the lips, nose and earlobes. Symptoms
	may be absent although euphoria, flushed face and headache are commonly experienced. At 25-40%, cyanosis is marked but		
	little disability occurs other than that produced on	· ·	
	lightheadedness, increasingly severe headache, a lethargy and stupor. Above 60% symptoms includ		_
	convulsions. Levels exceeding 70% may be fatal.	e dysprica, respiratory depress	ion, taonycardia of briadycardia, and
Skin Contact	The material is not thought to produce adverse he using animal models). Nevertheless, good hygiend		
Eye	be used in an occupational setting. This material can cause eye irritation and damage	e in some persons.	
	Long-term exposure to the product is not thought	to produce chronic effects adve	
			erse to the health (as classified by EC Directive
Chrania	using animal models); nevertheless exposure by a	all routes should be minimised	The state of the s
Chronic	Long term exposure to high dust concentrations m	nay cause changes in lung fund	as a matter of course.
Chronic	, , , , , , , , , , , , , , , , , , , ,	nay cause changes in lung fund	as a matter of course.
Cape Sundew/Venus	Long term exposure to high dust concentrations m	nay cause changes in lung fund	as a matter of course.
	Long term exposure to high dust concentrations m less than 0.5 micron penetrating and remaining in	nay cause changes in lung func the lung.	as a matter of course.
Cape Sundew/Venus Flytrap Multiplication	Long term exposure to high dust concentrations meless than 0.5 micron penetrating and remaining in TOXICITY Not Available 1. Value obtained from Europe ECHA Registered	nay cause changes in lung function the lung. IRRITATION Not Available Substances - Acute toxicity 2.	as a matter of course. tion i.e. pneumoconiosis, caused by particles Value obtained from manufacturer's SDS.
Cape Sundew/Venus Flytrap Multiplication Basal Medium	Long term exposure to high dust concentrations m less than 0.5 micron penetrating and remaining in TOXICITY Not Available	nay cause changes in lung function the lung. IRRITATION Not Available Substances - Acute toxicity 2.	as a matter of course. tion i.e. pneumoconiosis, caused by particles Value obtained from manufacturer's SDS.
Cape Sundew/Venus Flytrap Multiplication Basal Medium	Long term exposure to high dust concentrations meless than 0.5 micron penetrating and remaining in TOXICITY Not Available 1. Value obtained from Europe ECHA Registered	nay cause changes in lung function the lung. IRRITATION Not Available Substances - Acute toxicity 2.	as a matter of course. tion i.e. pneumoconiosis, caused by particles Value obtained from manufacturer's SDS.

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Serious Eve			
Serious Eye Damage/Irritation	*	STOT - Single Exposure	~
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

🗶 – Data either not available or does not fill the criteria for classification Legend:

Data available to make classification

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

Cape Sundew/Venus	Endpoint	Test Duration (hr)	Species	Value	Source
Flytrap Multiplication Basal Medium	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation	
	No Data available for all ingredients	

12.4. Mobility in soil

Ingredient	Mobility	
	No Data available for all ingredients	

12.5. Results of PBT and vPvB assessment

	P	В	Т
Relevant available data	Not Available	Not Available	Not Available
PBT	×	×	×
vPvB	×	×	×
PBT Criteria fulfilled?			No
vPvB			No

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

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13.1. Waste treatment methods

Containers may still present a chemical hazard/ danger when empty.

▶ Return to supplier for reuse/ recycling if possible.

Otherwise:

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

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

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

- ▶ Reduction
- ► Reuse

Product / Packaging disposal

- ► Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted.

- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- ▶ Consult State Land Waste Management Authority for disposal.
- ▶ Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Waste treatment options

Not Available

Sewage disposal options

Not Available

SECTION 14 Transport information

Labels Required



Tunnel Restriction Code

Marine Pollutant

NO 1Y

HAZCHEM

Land transport (ADR-RID)

1/1 1 IIN number or ID

number	1477	1477		
14.2. UN proper shipping name	NITRATES, INORGANIC, N.O.	NITRATES, INORGANIC, N.O.S.		
14.3. Transport hazard	Class 5.1			
class(es)	Subsidiary risk Not Applica	cable		
14.4. Packing group	II .	П		
14.5. Environmental hazard	Not Applicable	Not Applicable		
	Hazard identification (Kemler	er) 50		
	Classification code	O2		
14.6. Special precaution	Hazard Label	5.1		
for user	Special provisions	511		
	Limited quantity	1 kg		

Air transport (ICAO-IATA / DGR)

14.1. **UN number** 1477

2 (E)

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14.2. UN proper shipping name	Nitrates, inorganic, n.o.s.			
14.3. Transport hazard class(es)	ICAO/IATA Class	5.1		
	ICAO / IATA Subrisk	Not Applicable		
	ERG Code 5L			
14.4. Packing group	II			
14.5. Environmental hazard	Not Applicable			
14.6. Special precautions for user	Special provisions		A3 A803	
	Cargo Only Packing Instructions		562	
	Cargo Only Maximum Qty / Pack		25 kg	
	Passenger and Cargo Packing Instructions		558	
	Passenger and Cargo Maximum Qty / Pack		5 kg	
	Passenger and Cargo Limited Quantity Packing Instructions		Y544	
	Passenger and Cargo Limited Maximum Qty / Pack		2.5 kg	

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1477	
14.2. UN proper shipping name	NITRATES, INORGANIC, N.O.S.	
14.3. Transport hazard class(es)	IMDG Class 5.	.1
	IMDG Subrisk No	ot Applicable
14.4. Packing group	II .	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	F-A, S-Q
	Special provisions	Not Applicable
	Limited Quantities	1 kg

Inland waterways transport (ADN)

mana water waye transp	it (ADI)	
14.1. UN number	1477	
14.2. UN proper shipping name	NITRATES, INORGANIC, N.O.S.	
14.3. Transport hazard class(es)	5.1 Not Applicable	
14.4. Packing group		
14.5. Environmental hazard	Not Applicable	
	Classification code O2	
	Special provisions 511	
14.6. Special precautions for user	Limited quantity 1 kg	
	Equipment required PP	
	Fire cones number 0	

14.7. Maritime transport in bulk according to IMO instruments

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

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14.7.3. Transport in bulk in accordance with the IGC Code

Product name Ship Type

SECTION 15 Regulatory information

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

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable -: Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category

Not Available

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

ECHA SUMMARY

Not Applicable

National Inventory Status

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	Not Available	
Canada - DSL	Not Available	
Canada - NDSL	Not Available	
China - IECSC	Not Available	
Europe - EINEC / ELINCS / NLP	Not Available	
Japan - ENCS	Not Available	
Korea - KECI	Not Available	
New Zealand - NZIoC	Not Available	
Philippines - PICCS	Not Available	
USA - TSCA	Not Available	
Taiwan - TCSI	Not Available	
Mexico - INSQ	Not Available	
Vietnam - NCI	Not Available	
Russia - FBEPH	Not Available	
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	15/05/2022
Initial Date	15/05/2022

Full text Risk and Hazard codes

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.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

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EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

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

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

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 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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