BioPoint Bulk Stock - Cryptosporidium parvum

Biopoint Pty Ltd

Chemwatch Hazard Alert Code: **1**

Chemwatch: **5231-45**
Version No: **6.1**
Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Issue Date: **23/12/2022**
Print Date: **09/01/2023**
S.GHS.AUS.EN

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

Product Identifier

Product name	BioPoint Bulk Stock - Cryptosporidium parvum
Chemical Name	Not Applicable
Synonyms	BULK STOCK Live Cryptosporidium parvum
Proper shipping name	BIOLOGICAL SUBSTANCE, CATEGORY B
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Quality control sample for Cryptosporidium analysis.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	**Biopoint Pty Ltd**
Address	Suite 16, 13A, Narabang Way, Belrose, Sydney NSW 2085 Australia
Telephone	+61 2 8316 7939
Fax	Not Available
Website	www.biopoint.com.au
Email	info@biopoint.com.au

Emergency telephone number

Association / Organisation	**Biopoint Pty Ltd**	**CHEMWATCH EMERGENCY RESPONSE**
Emergency telephone numbers	+61 2 8316 7939	+61 1800 951 288
Other emergency telephone numbers	Not Available	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification [1]	Not Applicable

Label elements

Hazard pictogram(s)	Not Applicable
Signal word	**Not Applicable**

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Page 1 continued...

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available		up to 1000,000,000 viable
137259-50-8	NotSpec	Cryptosporidium parvum
Not Available		oocysts
Not Available	NotSpec	ingredients proprietary non hazardous, including
Not Available		buffer and
7732-18-5	NotSpec	water
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

Description of first aid measures

Eye Contact	▸ If material containing a biological agent comes in contact with the eyes: ▸ Seek immediate medical attention ▸ Removal of contact lenses should only be undertaken by skilled personnel.
Skin Contact	▸ For any suspected contact with a material containing a biological agent ▸ Rinse thoroughly with water and perform approved disinfection procedures ▸ Seek medical attention.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor.
Ingestion	Transport to hospital or doctor and seek immediate attention.

Indication of any immediate medical attention and special treatment needed

Monitor patient for symptoms (eosinpohils in CSF). Confirm diagnosis by microscopic specimens and identification of oocysts in fecal smears. Rehydration and supportive therapy in patients who are not immunocompromised. LABORATORY ACQUIRED INFECTIONS: There has been one laboratory acquired infections reported 1983 as a result of accidental parenteral inoculation (needle stick). There is no effective therapeutic agent available.
Treat symptomatically.
Protective vaccination/immunisation should be provided to workers depending on the organism being worked with.
for infectious organisms:

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO.

SPECIAL CONSIDERATIONS

- Symptomatic and supportive care should not be delayed.

BRONSTEIN, A.C. and CURRANCE, P.L.
EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994
SURVEILLANCE on the organism being worked with.
FIRST AID / TREATMENT
DRUG SUSCEPTIBILITY:

SECTION 5 Firefighting measures

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

Advice for firefighters

Continued...

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves in the event of a fire. ▸ Prevent, by any means available, spillage from entering drains or water courses. ▸ Use fire fighting procedures suitable for surrounding area. ▸ **DO NOT** approach containers suspected to be hot. ▸ Cool fire exposed containers with water spray from a protected location. ▸ If safe to do so, remove containers from path of fire. ▸ Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	▸ Non combustible. ▸ Not considered to be a significant fire risk. ▸ Expansion or decomposition on heating may lead to violent rupture of containers. ▸ Decomposes on heating and may produce toxic fumes of carbon monoxide (CO). ▸ May emit acrid smoke. Decomposes on heating and produces toxic fumes of: carbon dioxide (CO_2)
HAZCHEM	2X

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	Action to be taken in the event of damage or leakage: ▸ If any person responsible for the carriage or opening of packages containing infectious substances (Class 6.2) becomes aware of damage to or leakage from such packages he/she should: ▸ Avoid handling the package or keep handling to a minimum ▸ Inspect adjacent packages for contamination and put aside any that may have been contaminated. ▸ Inform the appropriate Health or Veterinary Authority, and provide information on any other countries of transit where persons may have been exposed to danger; and ▸ Notify the consignor and/or consignee. ▸ A Public Health or Veterinary Authority to which actual or suspected leakage from or damage to an infectious substance package is reported, should notify the authorities of any countries in which the package may have been handled including countries in transit. [IMDG Code p. 6309] ▸ Allow aerosols to settle. ▸ Cover spill with paper towel. ▸ Apply a 1% sodium hypochlorite solution. ▸ Start application from the perimeter of the spill and work towards the centre. ▸ Allow sufficient contact time (30 minutes) before beginning clean-up.
Major Spills	▸ Generally not applicable.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	Laboratories and areas where active biological agents are handled must be restricted to authorised persons trained to perform specific tasks. Clothing restrictions must be enforced in these areas and the mandatory equipment worn. Laboratory Containment or Physical Containment Level 2 (PC 2) must be used for work with biological agents in Hazard or Risk Group 2. ▸ Laboratory personnel must receive suitable and sufficient information, instruction and training in working safely with agents in Group 2. ▸ A high standard of supervision of the work should be maintained. Access to the laboratory is to be restricted to authorised persons. ▸ There must be specified disinfection procedures. ▸ Mechanically ventilated laboratories must be maintained at negative air pressure while work is in progress. ▸ Benches or other working surfaces must be impervious to water, easy to clean and resistant to acids, alkalies, solvents and disinfectants. ▸ Safe storage must be provided for biological agents. ▸ Procedures that give rise to infectious aerosols must be conducted in a microbiological safety cabinet, isolator, glove box or otherwise suitably contained. ▸ Access to an incinerator shall be provided for the disposal of infected animal carcasses. ▸ There should be adequate space (24m3) in a laboratory for each worker. ▸ Eating, chewing, drinking, smoking, taking medication, storing food and applying cosmetics in the laboratory should be forbidden. ▸ Bench surfaces should be regularly decontaminated according to the pattern of the work. ▸ Hands should be decontaminated immediately when contamination is suspected, after handling infective materials and before leaving the laboratory. ▸ When gloves are worn, these should be washed or preferably changed before handling items likely to be touched by others not wearing gloves, (eg phones, paperwork). Computer keyboards and, where practicable, equipment controls should be protected by a removable flexible cover that can be disinfected. ▸ A means for the safe collection, storage and disposal of contaminated waste shall be provided. ▸ Materials for autoclaving should be transported to the autoclave in robust containers without spillage. ▸ Contaminated waste should be suitably labelled before removal for incineration. Carcasses for incineration must be transported in secure containers to the incinerator site. ▸ Used laboratory glassware and other materials awaiting sterilisation before recycling should be stored in a safe manner. Pipettes, if placed in disinfectant, should be totally immersed. ▸ All accidents and incidents should be immediately reported to and recorded by the person responsible for the work or other delegated person Animal Containment Level 2 is suitable for work with vertebrates that are deliberately inoculated with biological agents of Hazard Group 2. ▸ Personnel must receive suitable and sufficient information, instruction and training in the handling of infected animals and an appropriate standard of supervision of the work should be maintained. Those having contact with animals and waste materials arising from the work must

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	be made familiar with any local codes of practice and be aware of any other precautions or procedures that may be required, eg protection from latent or persistent infections in the particular species in use. ▸ A person responsible for animal experiments must ensure that all those who need to know are made aware of the particular hazards concerned. ▸ Access to the animal room must be limited to authorised people. ▸ The animal room must be easy to clean. Bench surfaces must be impervious to water and resistant to acids, alkalis, solvents and disinfectants. ▸ There must be specified disinfection procedures in place. ▸ The animal room must be maintained at a negative air pressure if mechanically ventilated. ▸ Effective vector control measures (eg against rodents and insects) must be taken. ▸ Safe storage shall be provided for any biological agents brought into the animal room. ▸ A safety cabinet, isolator or other suitable containment must be used for procedures which involve handling infected animals, infected materials or where an aerosol may be created. ▸ An incinerator must be accessible for the disposal of animal carcasses. ▸ Suitable protective clothing and footwear should be worn in the animal room and cleansed or removed when leaving. ▸ A face shield should be worn when injecting animals. All manipulations should be performed so as to minimise the production of aerosols. ▸ Animal rooms should be adequately ventilated and, where mechanical ventilation is used, the room air should be extracted to the external atmosphere. An net inward air flow shall be maintained. ▸ The door to the animal room should be closed when infected animals are present and a sign placed on it indicating the level of the work. ▸ Eating, chewing, drinking, smoking, taking medication, storing food and applying cosmetics in the animal room should be forbidden. ▸ Mouth pipetting is forbidden. ▸ Facilities for hand washing shall be provided, preferably in the animal room. ▸ Hands should be decontaminated immediately when contaminated is suspected before leaving the animal room. ▸ All waste material, including animal bedding, should be rendered non-infective before disposal. ▸ Material for autoclaving or incineration and used animal cages should be transported without spillage. Material for incineration must be transported in secure containers. ▸ Used animal cages should be rendered non-infective by disinfection, fumigation, or heat treatment by steaming or autoclaving. ▸ Work surfaces should be disinfected after use. ▸ If floor drains are installed, the traps should always contain water. ▸ Drain traps should regularly be disinfected and cleaned. ▸ All accidents and incidents should be immediately reported to and recorded by the person responsible for the work or other delegated person Where invertebrates are known to be infected with biological agents, the principles of containment applying to animal rooms must be applied. Work must be done at the level of containment appropriate to hazard rating of the agent concerned*. In adopting the principles used in the containment of animals the following additional requirements should be considered. ▸ Separate rooms should be used for infected and non-infected invertebrates. ▸ Invertebrates should be contained appropriately according to whether they live in water, are amphibious, crawl or jump, or fly. ▸ Aquatic or amphibious invertebrates should be kept in tanks with lids to prevent escape. ▸ Crawling, jumping or flying invertebrates should be kept in insect-proof rooms, ventilation inlets and outlets should be screened, entry to rooms should be through airlocks (insectocutors may be placed in airlocks), measures should be taken to ensure that escaped invertebrates are easily detected, recaptured and destroyed, laboratory sinks should be provided with adequate traps, liquid and solid waste should be treated before disposal (preferably with heat, rather than by chemical means). ▸ Insecticidal sprays, although useful in an emergency, may render the room unfit for invertebrates. ▸ Arthropods may be chilled to reduce their activity and prevent escape. Flying or crawling arthropods requiring Containment Level 1 and 2, should be handled on white trays to detect escapees. ▸ Ticks and mites should be kept in containers over trays of oil. ▸ Flying insects infected with agents in Hazard Groups 2, 3 or 4 should be kept in double cages; both enclosures should be labelled. ▸ Experimental cages/containers should be numbered/labelled or otherwise documented to indicate hazard ▸ Containment Level 3 or 4, flying or crawling arthropods should be kept in identified lots and each lot accounted for; they should also be handled in safety cabinets, isolators or partial containment devices provided with HEPA-filtered exhaust ventilation or its equivalent. ▸ Infected invertebrates not known to be dead should be handled in a safety cabinet or other form of safe enclosure. Records should be made of the number of individual invertebrates received by a laboratory as soon as is practically possible. Each invertebrate should be accounted for as the work proceeds through to final fixation or disposal. ▸ Where the identification of flying or crawling invertebrates alone is required, the container may be frozen two hours @ -20 C to kill them. Full Containment Level 3 is not always required for all work with Hazard Group 3 agents. Non-infective stages in the life-cycle of a parasite and certain agents for which a derogation has been allowed, may not always demand an inward airflow or use of a safety cabinet.
Other information	It is required for safe working that the Containment Level selected for any laboratory suite, storeroom or animal room must match the hazard grouping of the biological agent as a minimum. (Some exceptions may apply)

Conditions for safe storage, including any incompatibilities

Suitable container	Container capacity approx. 2mls. Receptacles with their closures or fittings shall be as approved by the competent authority of the country of origin.
Storage incompatibility	Presence of heat source and direct sunlight (ultra-violet radiation). ▸ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
BioPoint Bulk Stock - Cryptosporidium parvum	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
Cryptosporidium parvum	Not Available	Not Available
water	Not Available	Not Available

Exposure controls

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Appropriate engineering 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 usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.
An approved self contained breathing apparatus (SCBA) may be required in some situations.
Provide adequate ventilation in warehouse or closed storage area. 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.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
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 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters 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.
It is required for safe working that the Containment Level selected for any laboratory suite, storeroom or animal room must match the hazard grouping of the biological agent as a minimum. (Some exceptions may apply)
FUMIGATION:
Microbiological safety cabinets must always be fumigated if a large spill of infectious material occurs within them, before filters are changed or any maintenance work is carried out which involves access to the interior of the cabinet (air duct maintenance for example).
- Fumigation should be conducted with the night door securely sealed and the non-return valve left closed.
- Passive migration of the fumigant through the filter is allowable. Alternately the valve may be left open and the fan may be run for 10 to 15 seconds thus ensuring penetration of filter medium. The valve should then be closed and the fan switched off allowing the remainder of the fumigant to disperse within the cabinet. After at least six hours the fumigant should be exhausted to atmosphere by switching on the fan and allowing room air to enter through, for example, the night door bung-hole.
- Ensure that no personnel remain in the vicinity of the exhaust outlet and that exhaust air does not enter windows or ventilation air intakes.
- Discarded filter units should be bagged and autoclaved prior to disposal.
- There are special difficulties if the cabinet has been used with agents responsible for causing transmissible spongiform encephalophies as they are resistant to inactivation by formalin.

Access to the area is to be restricted to authorised persons. A specific disinfection procedure must be established and applied. If the area (laboratory, store, animal room) is mechanically ventilated it must be maintained at an air pressure negative to atmosphere whilst work is in progress.
If traffic in and out of Containment Level 2-4 rooms interferes with ventilation airflow patterns and, if the laboratory is ventilated specifically to contain airborne pathogens in the event of accident, then engineering controls and working arrangements must be devised to counter the risk of airborne transmission to other areas.
When undertaking procedures that are likely to give rise to infectious aerosols, a Class 1 microbiological Safety Cabinet conforming to BS5726 or with an equivalent, verified protection factor should be used. Cabinets should exhaust to outside air. Double HEPAR filtering is not necessary biological agents requiring Containment Level 2.
Approved full face respirator with HEPA filters capable of excluding particles of 0.3 micron size.

Personal protection

Eye and face protection

- Safety glasses with side shields
- Chemical goggles.
- 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], [AS/NZS 1336 or national equivalent]

Skin protection

See Hand protection below

Hands/feet protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material 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.

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	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: · 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
Body protection	See Other protection below
Other protection	▸ Laboratory coats or gowns should be side or back fastening and should be worn when in and removed when leaving the area. ▸ Separate storage, set apart from personal clothing, should be available in the laboratory suite. ▸ A wash basin should be located near the laboratory exit with taps that can be operated without being touched by hand.

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:
BioPoint Bulk Stock - Cryptosporidium parvum

Material	CPI
BUTYL	A
NEOPRENE	A
VITON	A
NATURAL RUBBER	C
PVA	C

* 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
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.

Respiratory protection

- 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

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, colourless, odourless liquid; mixes with water.

Physical state	Liquid	**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

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Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	Not Applicable	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Applicable	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Applicable	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Miscible	**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	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
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 infectious aerosols may result in an asymptomatic infection (most infections are asymptomatic) or a symptomatic infection. This is characterised by a sudden onset of diarrhoea with foul-smelling and greasy looking stools that lacks mucous and blood. This is associated with abdominal cramps, bloating, fatigue and weight loss. The infection is restricted to the small intestine without invasion. The incubation period for the disease ranges from 5-25 days, with an average period of 7-10 days. 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. Etiological (infectious) agents produce a variety of effects, some life-threatening. Most have an incubation period and no acute symptoms. INCUBATION PERIOD:
Ingestion	Potentially infectious. Accidental ingestion of the material may be damaging to the health of the individual.
Skin Contact	Potentially infectious. The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Contact with open wounds should be avoided as the material is potentially infectious. Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Principal routes of exposure are by skin contact, accidental injection (needle stick), ingestion and/or inhalation of aerosols. Symptoms and longer term effects are related to the pathology of the infection.

BioPoint Bulk Stock - Cryptosporidium parvum	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
Cryptosporidium parvum	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
water	**TOXICITY**	**IRRITATION**
	Oral (Rat) LD50; >90000 mg/kg[2]	Not Available
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

CRYPTOSPORIDIUM PARVUM & WATER	No significant acute toxicological data identified in literature search.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✗	**Reproductivity**	✗
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗

Continued...

Respiratory or Skin sensitisation	✗	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

BioPoint Bulk Stock - Cryptosporidium parvum	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
Cryptosporidium parvum	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
water	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	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*				

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ Infected materials should be placed in yellow waste sacks and suitably labelled (with permanent marker or tie-on label) showing the source of the material. ▸ Sacks should be no more than three quarters full and should be closed with purpose-made plastic ties or closures or, in the case of light-gauge sacks, may be tied off at the neck. Heat-sealers, purpose-made for clinical waste may also be used. ▸ Sacks should then be stored and transported in a robust secondary container which is leak-proof and which may be readily decontaminated. ▸ Alternately animal carcasses which present higher-level risks (for example material from Animal Containment Levels 3 and 4) may be transported in purpose-made plastic disposal containers. These are hermetically sealed with snap-on lids and are designed for safe transportation and incineration in their entirety. ▸ After sealing, the container should be externally decontaminated and labelled before removal to the incinerator. ▸ It is advisable to use only containers of the type which conform with drop-tests and leak-tests defined, for example, by the United Nations.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	NO
HAZCHEM	2X

Land transport (ADG)

UN number	3373
UN proper shipping name	BIOLOGICAL SUBSTANCE, CATEGORY B

Continued...

Transport hazard class(es)	Class: 6.2 Subrisk: Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: 319 341 Limited quantity: 0

Air transport (ICAO-IATA / DGR)

UN number	3373
UN proper shipping name	Biological substance, Category B
Transport hazard class(es)	ICAO/IATA Class: 6.2 ICAO / IATA Subrisk: Not Applicable ERG Code: 11L
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: Not Applicable Cargo Only Packing Instructions: See 650 Cargo Only Maximum Qty / Pack: See 650 Passenger and Cargo Packing Instructions: See 650 Passenger and Cargo Maximum Qty / Pack: See 650 Passenger and Cargo Limited Quantity Packing Instructions: Forbidden Passenger and Cargo Limited Maximum Qty / Pack: Forbidden

Sea transport (IMDG-Code / GGVSee)

UN number	3373
UN proper shipping name	BIOLOGICAL SUBSTANCE, CATEGORY B
Transport hazard class(es)	IMDG Class: 6.2 IMDG Subrisk: Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	EMS Number: F-A, S-T Special provisions: 319 341 Limited Quantities: 0

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

Not Applicable

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

Product name	Group
Cryptosporidium parvum	Not Available
water	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
Cryptosporidium parvum	Not Available
water	Not Available

SECTION 15 Regulatory information

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

Cryptosporidium parvum is found on the following regulatory lists

Not Applicable

water is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

National Inventory Status

National Inventory	Status

Continued...

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (Cryptosporidium parvum)
Canada - DSL	No (Cryptosporidium parvum)
Canada - NDSL	No (Cryptosporidium parvum; water)
China - IECSC	No (Cryptosporidium parvum)
Europe - EINEC / ELINCS / NLP	No (Cryptosporidium parvum)
Japan - ENCS	No (Cryptosporidium parvum)
Korea - KECI	No (Cryptosporidium parvum)
New Zealand - NZIoC	No (Cryptosporidium parvum)
Philippines - PICCS	No (Cryptosporidium parvum)
USA - TSCA	No (Cryptosporidium parvum)
Taiwan - TCSI	No (Cryptosporidium parvum)
Mexico - INSQ	No (Cryptosporidium parvum)
Vietnam - NCI	No (Cryptosporidium parvum)
Russia - FBEPH	No (Cryptosporidium parvum)
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	23/12/2022
Initial Date	26/11/2016

SDS Version Summary

Version	Date of Update	Sections Updated
5.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
6.1	23/12/2022	Classification review due to GHS Revision change.

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
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