

Apollo Scientific

Part Number: **OR0978** Version No: **1.1** Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878) Chemwatch Hazard Alert Code: 3

Issue Date: **16/09/2022** Print Date: **17/04/2023** S.REACH.GBR.EN

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

1.1. Product Identifier

Product name	Bromopropan-1-ol	
Chemical Name	3-bromo-1-propanol	
Synonyms	Not Available	
Chemical formula	C3H7BrO	
Other means of identification	Not Available	
CAS number	627-18-9	
EC number	210-986-6	

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	tefield Road, Bredbury SK62QR United Kingdom	
Telephone	14060505	
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]

H318 - Serious Eye Damage/Eye Irritation Category 1, H335 - Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, H302 - Acute Toxicity (Oral) Category 4, H315 - Skin Corrosion/Irritation Category 2

Legend: 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

2.2. Label elements

Hazard pictogram(s)	
Signal word	Danger

Hazard statement(s)

H318	auses serious eye damage.	
H335	May cause respiratory irritation.	
H302	Harmful if swallowed.	
H315	Causes skin irritation.	

Supplementary Phrases

Not Applicable

Precautionary statement(s) Prevention

P271 Use only outdoors or in a well-ventilated area.	
P280Wear protective gloves, protective clothing, eye protection and face protection.	
P261 Avoid breathing mist/vapours/spray.	
P264	Wash all exposed external body areas thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.	

Precautionary statement(s) Response

P305+P351+P338	F IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.				
P310	Immediately call a POISON CENTER/doctor/physician/first aider.				
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.				
P302+P352	ON SKIN: Wash with plenty of water.				
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.				
P330	Rinse mouth.				
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

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

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	3-Bromopropan-1-ol	Not Applicable	Not	Not Available

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
				Applicable	

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

3.2.Mixtures

See 'Information on ingredients' in section 3.1

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	 If this product comes in contact with eyes: Wash out immediately with water. If irritation continues, 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.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

5.2. Special hazards arising from the substrate or mixture

Fire incompatibility None known.

5.3. Advice for firefighters

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. 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.
Fire/Explosion Hazard	 Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit irritating/ toxic fumes. May emit acrid smoke. Mists containing combustible materials may be explosive.

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

Image: Provide and the second seco		
 Keine and the second second	Minor Spills	 Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up.
If contamination of drains or waterways occurs, advise emergency services.	Major Spills	 Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains.

6.4. Reference to other sections

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

SECTION 7 Handling and storage

	Avoid all personal contact, including inhalation.
	Wear protective clothing when risk of exposure occurs.
	Use in a well-ventilated area.
	Prevent concentration in hollows and sumps.
	DO NOT enter confined spaces until atmosphere has been checked.
	Avoid smoking, naked lights or ignition sources.
	Avoid contact with incompatible materials.
Safe handling	When handling, DO NOT eat, drink or smoke.
	Keep containers securely sealed when not in use.
	Avoid physical damage to containers.
	Always wash hands with soap and water after handling.
	Work clothes should be laundered separately.
	Use good occupational work practice.
	Observe manufacturer's storage and handling recommendations contained within this SDS.
	Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
Fire and explosion	See section 5
protection	
	Store in original containers.
	Keep containers securely sealed.
	No smoking, naked lights or ignition sources.
Other information	Store in a cool, dry, well-ventilated area.
	Store away from incompatible materials and foodstuff containers.
	Protect containers against physical damage and check regularly for leaks.
	Observe manufacturer's storage and handling recommendations contained within this SDS.

7.2. Conditions for safe storage, including any incompatibilities

	► Metal can or drum
Suitable container	Packaging as recommended by manufacturer.
	Check all containers are clearly labelled and free from leaks.

Storage incompatibility	Avoid contamination of water, foodstuffs, feed or seed. None known
Hazard categories in accordance with Regulation (EC) No 1272/2008	Not Available
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	Not Available

7.3. Specific end use(s)

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						

Not Applicable

Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
3-Bromopropan-1-ol	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
3-Bromopropan-1-ol	Not Available		Not Available	

8.2. Exposure controls

	The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an a designed properly. The design of a ventilation system must match the particular process and chemical or Employers may need to use multiple types of controls to prevent employee overexposure. General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA	air contaminant if r contaminant in use.
8.2.1. Appropriate engineering controls	Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or close contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine t fresh circulating air required to effectively remove the contaminant. Type of Contaminant:	-
	contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine t fresh circulating air required to effectively remove the contaminant.	he "capture velocities
	contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine t fresh circulating air required to effectively remove the contaminant. Type of Contaminant:	he "capture velocitie Air Speed: 0.25-0.5 m/s

	grinding, abrasive blasting, tumbling, high speed wheel ge velocity into zone of very high rapid air motion).	enerated dusts (released at high initial	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 distant generally decreases with the square of distance from the ex- extraction point should be adjusted, accordingly, after refere extraction fan, for example, should be a minimum of 1-2 m/s meters distant from the extraction point. Other mechanical of apparatus, make it essential that theoretical air velocities ar- installed or used.	ice away from the opening of a simple ext traction point (in simple cases). Therefore ince to distance from the contaminating s s (200-400 f/min.) for extraction of solvent considerations, producing performance de	e the air speed at the ource. The air velocity at the ts generated in a tank 2 eficits within the extraction
8.2.2. Individual protection measures, such as personal protective equipment			
Eye and face protection	 Safety glasses with side shields Chemical goggles. Contact lenses may pose a special hazard; soft contact document, describing the wearing of lenses or restriction include a review of lens absorption and adsorption for th Medical and first-aid personnel should be trained in their event of chemical exposure, begin eye irrigation immedia be removed at the first signs of eye redness or irritation have washed hands thoroughly. [CDC NIOSH Current Irritation in the section in the section is a standard in the section in the section in the section is a standard in the section in the section in the section is a standard in the section in the section in the section is a standard in the section in the section in the section is a standard in the section in the section in the section in the section is a standard in the section in the section in the section is a standard in the section in the section in the section is a standard in the section in the section in the section is a standard in the section is a standard in the section in the section	ns on use, should be created for each wo be class of chemicals in use and an accou- r removal and suitable equipment should ately and remove contact lens as soon as - lens should be removed in a clean envir	rkplace or task. This should unt of injury experience. be readily available. In the s practicable. Lens should ronment only after workers
Skin protection	See Hand protection below		
Hands/feet protection	Wear general protective gloves, eg. light weight rubber glov The selection of suitable gloves does not only depend on th manufacturer to manufacturer. Where the chemical is a prep can not be calculated in advance and has therefore to be ch The exact break through time for substances has to be obtat observed when making a final choice. Personal hygiene is a key element of effective hand care. G should be washed and dried thoroughly. Application of a nor Suitability and durability of glove type is dependent on usag 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 When prolonged or frequently repeated contact may occur greater than 240 minutes according to EN 374, AS/NZS 216 When only brief contact is expected, a glove with a protect according to EN 374, AS/NZS 2161.10.1 or national equival Some glove polymer types are less affected by movement long-term use. Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are Excellent when breakthrough time > 20 min Fair when breakthrough time < 20 min Fair when breakthrough time < 20 min Fair when breakthrough time < 20 min Foor when glove material degrades For general applications, gloves with a thickness typically gr It should be emphasised that glove thickness is not necessa permeation efficiency of the glove will be dependent on the should also be based on consideration of the task requirem Glove thickness may also vary depending on the glove man manufacturers technical data should always be taken into ar Note: Depending on the activity being conducted, gloves of	e material, but also on further marks of quearation of several substances, the resistanceked prior to the application. ined from the manufacturer of the protect loves must only be worn on clean hands. n-perfumed moisturiser is recommended. e. Important factors in the selection of glo 374, US F739, AS/NZS 2161.1 or nation a glove with a protection class of 5 or hi 51.10.1 or national equivalent) is recomm- ion class of 3 or higher (breakthrough time ent) is recommended. and this should be taken into account where the selection of rated as:	ance of the glove material tive gloves and has to be . After using gloves, hands oves include:

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.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: • Overalls. • Barrier cream. • Eyewash unit.

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: 3-Bromopropan-1-ol

Material	СРІ
BUTYL	A
NEOPRENE	A
PVA	A
VITON	A

* 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.

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	Colourless		
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
Initial boiling point and boiling range (°C)	70-72/10mm	Molecular weight (g/mol)	Not Available
Flash point (°C)	93	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	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)	1.59	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	
10.2. Chemical stability	Product is considered stable and 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

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	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.
Eye	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	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

	ΤΟΧΙΟΙΤΥ	IRRITATION	
3-Bromopropan-1-ol	Not Available	Not Available	
Legend:	 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 		

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

Legend: X − Data either not available or does not fill the criteria for classification ✓ − 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

	Endpoint	Test Duration (hr)	Species	Value	Source
3-Bromopropan-1-ol	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 To 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

	Р	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

13.1. Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, a recycling or reuse may not always be appropriate. 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.
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3-Bromopropan-1-c	b
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	 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

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number or ID number	Not Applicable	Not Applicable			
14.2. UN proper shipping name	Not Applicable	lot Applicable			
14.3. Transport hazard class(es)	Class Subsidiary risk				
14.4. Packing group	Not Applicable	Not Applicable			
14.5. Environmental hazard	Not Applicable	Not Applicable			
	Hazard identifica	tion (Kemler)	Not Applicable		
	Classification code		Not Applicable		
14.6. Special precautions for user	Hazard Label		Not Applicable		
	Special provisions		Not Applicable		
	Limited quantity		Not Applicable		
	Tunnel Restrictio	n Code	Not Applicable		

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	lot Applicable			
14.2. UN proper shipping name	Not Applicable	Not Applicable			
14.3. Transport hazard	ICAO/IATA Class Not Applicable				
class(es)	ICAO / IATA Subrisk	ICAO / IATA Subrisk Not Applicable			
	ERG Code	Not Applicable			
14.4. Packing group	Not Applicable	Not Applicable			
14.5. Environmental hazard	Not Applicable				
	Special provisions		Not Applicable		
	Cargo Only Packing Ir	nstructions	Not Applicable		
14.6. Special precautions for user	Cargo Only Maximum Qty / Pack		Not Applicable		
	Passenger and Cargo Packing Instructions		Not Applicable		
	Passenger and Cargo Maximum Qty / Pack		Not Applicable		
	Passenger and Cargo Limited Quantity Packing Instructions		Not Applicable		
	Passenger and Cargo Limited Maximum Qty / Pack		Not Applicable		

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable
14.2. UN proper shipping name	Not Applicable

3-1	Rr	om	on	ro	nan	-1-	ol
J -I	– • • •	UIII	νμ	101	Jan		U 1

14.3. Transport hazard	IMDG Class	Not Applicable					
class(es)	IMDG Subrisk	IMDG Subrisk Not Applicable					
14.4. Packing group	Not Applicable	ot Applicable					
14.5. Environmental hazard	Not Applicable						
14.6. Special precautions for user	EMS Number Special provisions						
	Limited Quantities	Not Applicable					

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	ot Applicable					
14.2. UN proper shipping name	Not Applicable	lot Applicable					
14.3. Transport hazard class(es)	Not Applicable Not	lot Applicable Not Applicable					
14.4. Packing group	Not Applicable	ot Applicable					
14.5. Environmental hazard	Not Applicable	Not Applicable					
	Classification code	Not Applicable					
14.6. Special precautions for user	Special provisions Not Applicable						
	Limited quantity	Not Applicable					
	Equipment required	Not Applicable					
	Fire cones number	Not Applicable					

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

Product name	Group	
1473 Transport in b	ulk in accordance with the IGC Code	

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

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

ECHA SUMMARY

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Not Available

National Inventory	Status
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	16/09/2022
Initial Date	16/09/2022

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

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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