



Version No: 1

Issue date: 15/May/2025

Revised: NONE

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

Product name	CB Buffer
Synonyms	Not Available
Other means of identification	Not Available

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

Relevant identified uses	Laboratory use.
Uses advised against	Not Applicable

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

Registered company name	CleanNA
Address	Coenecoop 75, 2741 PH, Waddinxveen, The Netherlands
Telephone	+31 (0) 182 22 33 50
Fax	+31 (0) 182 22 33 98
Website	www.cleanna.com
Email	info@cleanna.com

1.4. Emergency telephone number

Emergency telephone numbers	112 (European emergency number)
-----------------------------	---------------------------------

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments [1]	Not Applicable
-----------------------------------------------------------------------------------	----------------

2.2. Label elements

Hazard pictogram(s)			
	GHS05	GHS08	GHS09
	Signal word	Danger	

Hazard statement(s)

H302 + H332	Harmful if swallowed or inhaled
H315	Causes skin irritation
H318	Causes serious eye irritation
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects

Supplementary statement(s)

Supplementary statement(s)	Not Applicable
----------------------------	----------------

Precautionary statement(s) Prevention

P261	Avoid breathing dust / fume / gas / mist / vapours / spray
P264	Wash skin thoroughly after handling
P273	Avoid release to environment
P280	Wear protective gloves / eye protection / face protection
P301+ P312	IF SWALLOWED: Call doctor or Poisons Information Centre if feeling unwell
P302 + P352	IF ON SKIN: Wash with plenty of water
P304 + P340 + P312	IF INHALED: remove person to fresh air and keep comfortable for breathing. Call doctor or Poisons Information Center if feeling unwell
P305 + P351 + P338	IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

Precautionary statement(s) Response

P101	If medical advice is needed have product container or label at hand
-------------	---------------------------------------------------------------------

Precautionary statement(s) Storage

	Not Applicable
--	----------------

Precautionary statement(s) Disposal

P501	Dispose of contents / container to an approved waste disposal plant
-------------	---------------------------------------------------------------------

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**

See 'Composition on ingredients' in Section 3.2

3.2 Mixtures

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
1.57-09-0 2.200-311-3 3. Not Available 4.01-2119989160-35-xxxx	1 - 25 %	CTAB	Acute Toxicity – Category 4 Skin Irritation – Category 2 Serious Eye Damage – Category 1 Specific Target Organ Toxicity – Single Exposure (Resp. Tract) – Category 3 Specific Target Organ Toxicity – Repeated Exposure (Gastr. Tract)– Cat. 2 Short term (Acute) Aquatic Hazard – Category 1 Long-Term (Chronic) Aquatic Hazard – Category 1 H302; H315; H318; H335; H373; H400; H410 ^[1]	Aquatic Acute: 100 Aquatic Chronic: 10	Not Available
Legend	¹ Classification drawn from Regulation (EU) No 1272/2008 - Annex VI				

SECTION 4. First aid measures**4.1. Description of first aid measures**

Eye Contact	<ul style="list-style-type: none"> - Immediately flush with water for at least 15 minutes - Remove contact lenses. - Consult a doctor in event of irritation
Skin Contact	<ul style="list-style-type: none"> - Immediately flush skin with water for at least 15 minutes. - Remove contaminated clothing and shoes. Wash before reuse. - Consult a doctor in event of irritation
Inhalation	<ul style="list-style-type: none"> - If inhaled remove from contaminated area into fresh air. - Consult a doctor in event of irritation or breathing difficulties
Ingestion	<ul style="list-style-type: none"> - Rinse mouth with water. Do NOT induce vomiting unless directed by medical personnel - Consult a doctor or a Poison Information Center when in doubt

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**

- powder
- CO2
- Use extinguishing media suitable for surrounding area

Contain gases / vapours / mists with water spray

5.2 Special hazards arising from the substrate or mixture

Fire Incompatibility	None known
-----------------------------	------------

5.3. Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> - Wear self-contained breathing apparatus - Contain escaping vapours with water - Prevent, by any means available, spillage from entering drains or water courses. - Use firefighting 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	<ul style="list-style-type: none"> - Combustible. - Not considered a significant fire risk, however containers may burn - May emit nitrogen oxides (NOx) - May emit carbon oxides - May emit sodium oxides - May emit hydrogen chloride gas

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

Minor Spills	<ul style="list-style-type: none"> - 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 / sweep up. - Place in a suitable, labelled container for waste disposal.
Major Spills	<ul style="list-style-type: none"> - Clear area of personnel and move upwind. - Alert Fire Brigade and tell them location and nature of hazard. - Control personal contact with the substance by using protective equipment - Prevent, by any means available, spillage from entering drains or water courses. - Recover product wherever possible. - Collect residue and seal in labelled drums for disposal. - Wash area and prevent runoff into drains. - If contamination of drains or waterways occurs, advise emergency services.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> - Avoid all personal contact, including inhalation. - Wear protective clothing when risk of exposure occurs. - Use in a well-ventilated area. - Prevent formation of aerosols / dust - Work under hood - Do NOT inhale mixture - Prevent concentration in hollows and sumps. - DO NOT enter confined spaces until atmosphere has been checked. - DO NOT allow material to contact humans, exposed food or food utensils. - 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. - Launder contaminated clothing before re-use. - Use good occupational work practice. - Observe manufacturer's storage and handling recommendations contained within this SDS.
Fire and explosion protection	See section 5
Other information	None known

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> - Polyethylene or polypropylene container. - Check all containers are clearly labelled and free from leaks.
Storage incompatibility	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
CTAB	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 Available	Not Available	Not Available	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
CTAB	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
CTAB	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.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. 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.

- Use in a fume hood where applicable.
- Ensure laboratory is equipped with safety shower and eye wash station.


Type of contaminant	Air Speed
solvent, vapours, degreasing etc., evaporating from tank (in still air)	0.25 – 0.50m/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)	0.50 - 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 - 2.50 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).	2.50 -10 m/s (500 – 2000 f/min)

8.2.1. Appropriate engineering controls

Within each range the appropriate value depends on:

Lower end of range	Upper end of 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.

8.2.2. Personal protection	
Eye and face protection	<ul style="list-style-type: none"> - Safety glasses with side shields - Chemical goggles <p>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 lenses as soon as practicable. Lens should be removed at first signs of eye redness or irritation. Lens should be removed in a clean environment only after workers have washed their hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</p>
Skin protection	See Hand protection below
Hand / feet protection	<ul style="list-style-type: none"> - Wear chemical protective gloves, e.g. PVC - Wear safety footwear or safety gumboots, e.g. Rubber <p>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.</p> <p>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.</p> <p>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.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> · frequency and duration of contact, · chemical resistance of glove material, · glove thickness and · dexterity <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> - 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. <p>As defined in ASTM F-739-96 in any application, gloves are rated as:</p> <ul style="list-style-type: none"> - Excellent when breakthrough time > 480 min - Good when breakthrough time > 20 min - Fair when breakthrough time < 20 min - Poor when glove material degrades <p>For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.</p> <p>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.</p> <p>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.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:</p> <ul style="list-style-type: none"> - 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 <p>Use nitrile rubber, NBR gloves Recommended thickness => 0.11 mm Value for permeation: Level => 480 min</p>
Body protection	See Other protection below
Other protection	<p>No special equipment is needed when handling small quantities.</p> <p>Otherwise:</p> <ul style="list-style-type: none"> - Overalls - Barrier cream - Eyewash unit

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)	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	Oxidizing 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 Applicable	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	Forms explosive mixtures with air on intense heating
10.2. Chemical stability	Product is considered stable under recommended storage conditions
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	Strong heating
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 toxicological effects**

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (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 either adverse health effects or irritation of the respiratory tract following inhalation (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.
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 characterized 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.

CB Lysis Buffer	TOXICITY		IRRITATION	
		Not Available		Not Available
CTAB	TOXICITY		IRRITATION	
	Oral (Rat) LD50:	1.150 mg/kg	Not Available	
	Dermal (Rabbit) LD50:	2.150 mg/kg	Not Available	

Legend:
1. Value obtained from Europe ECHA Registered Substances - Acute toxicity
2. Value obtained from RTECS - Register of Toxic Effect of chemical Substances

CTAB	Not Available
------	---------------

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:	✗ 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 Disruption Properties**

Not Available

11.2.2 Other information

See section 11.1

SECTION 12. Ecological information**12.1 Toxicity**

	Endpoint	Test duration (hr)	Species	Value	Source
GH Wash buffer	Not Available	Not Available	Not Available	Not Available	Not Available
CTAB	LC50	96	Fish	0.2 mg/L	2
	EC50	72	Algae or other aquatic plants	0,00411 mg/L	7
	NOEC	72	Algae or other aquatic plants	0,001 mg/L	7
Legend:	Extracted from: 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. Vendor Data				

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
CTAB	Not Available	Not Available

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
CTAB	Not Available

12.4. Mobility in soil

Ingredient	Mobility
CTAB	Not Available

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✘	✘	✘
vPvB	✘	✘	✘
PBT Criteria fulfilled?	No		
vPvB	No		

12.6. Endocrine Disruption Properties

Not Available

12.7. Other adverse effects

Not Available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	<p>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.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> - Reduction - Reuse - Recycling - Disposal (if all else fails) <p>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.</p> <p>Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none"> - 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. - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. - Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material). - Decontaminate empty containers. Observe all label requirements safeguards until containers are cleaned and destroyed
	<p>Waste treatment options Not Available</p> <p>Sewage disposal options Not Available</p>

SECTION 14. Transport information

Labels Required

Marine Pollutant	Yes
-------------------------	-----

NOTE: packages smaller than or equal to 5 kg / L are not dangerous goods of class 9

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

14.1. UN number	3077	
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Cetyl-N'N'N-trimethylammonium bromide)	
14.3. Transport hazard class(es)	Class	9
	Sub risk	Not Applicable
14.4. Packing group	III	
14.5. Environmental hazard	yes	
14.6. Special precautions for user	Hazard identification (Kemler)	Not Applicable
	Classification code	Not Applicable
	Hazard Label	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Tunnel Restriction Code	Not Applicable

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

14.1. UN number	3077	
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Cetyl-N'N'N-trimethylammonium bromide)	
14.3. Transport hazard class(es)	ICAO/IATA Class	9
	ICAO / IATA Sub risk	Not Applicable
	ERG Code	Not Applicable
14.4. Packing group	III	
14.5. Environmental hazard	yes	
14.6. Special precautions for user	Special provisions	Not Applicable
	Cargo Only Packing Instructions	Not Applicable
	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	3077	
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Cetyl-N'N'N-trimethylammonium bromide)	
14.3. Transport hazard class(es)	IMDG Class risk	9 IMDG Sub Not Applicable
14.4. Packing group	III	
14.5. Environmental hazard	Marine pollutant: yes	
14.6. Special precautions for user	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

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

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

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

Not Applicable

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	E1 – Environmental hazards
------------------------	----------------------------

15.2. Chemical safety assessment

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

ECHA SUMMARY

Not Available

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (Tris-HCl (hydrochloride))
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (Tris-HCl (hydrochloride))
Japan - ENCS	Yes
Korea - KECL	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
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**Full text Risk and Hazard codes**

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure.

Version Summary

Version	Date of Update	Sections Updated
1	15/MAY/2025	Initial version

Other information

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

Abbreviation	Definition
ACGIH	American Conference of Governmental Industrial Hygienists
AIIC	Australian Inventory of Industrial Chemicals
BCF	BioConcentration Factors
BEI	Biological Exposure Index
DSL	Domestic Substances List
EINECS	European Inventory of Existing Commercial chemical Substances
ENCS	Existing and New Chemicals Substances Inventory
ELINCS	European List of Notified Chemical Substances
ES	Exposure Standard
FBEPH	Russian Register of Potentially Hazardous Chemical and Biological Substances
IARC	International Agency for Research on cancer
IDLH	Immediately Dangerous to Life or Health Concentrations
IECSC	Inventory of Existing Chemical Substances in China
INSQ	Inventario Nacional de Sustancias Quimicas
KECI	Korea Existing Chemicals Inventory
LOAEL	Lowest Observed Adverse Effect Level
LOD	Limit Of Detection
NCI	National Chemical Inventory
NDSL	Non-Domestic Substances List
NLP	No-Longer Polymers
NOAEL	No Observed Adverse Effect Level
NZIoC	New Zealand Inventory of Chemicals
OSF	Odour Safety Factor
OTV	Odour Threshold Value
PC	Permissible Concentration
PICCS	Philippine Inventory of Chemicals and Chemical Substances
STEL	Short Term Exposure Limit
TCSI	Taiwan Chemical Substance Inventory
TEEL	Temporary Emergency Exposure Limit
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average