

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 24-Jul-2023

Revision date 09-Dec-2025

Revision Number 4

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product Code(s)	20171
Safety data sheet number	20171
Product Name	TRIETHANOLAMINE 99%
Substance Name	TRIETHANOLAMINE
EC Number	203-049-8
CAS No	102-71-6
Synonyms	TRI (2-HYDROXYETHYL)AMINE, TRIETHANOLAMINE PURE (TEA99), TELA, TRIETHANOLAMINE 99 % BSF, TRIETHANOLAMINE 99% INS, 2,2',2''-NITRILOTRIETHANOL, TRIETHANOLAMINE PURE, TRIETHANOLAMINE CARE, TRIETHANOLAMINE PURE 99%, TRIETHANOLAMINE PURE (TEA99) BSF
Pure substance/mixture	Substance
Molecular weight	149.19

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

Recommended use	Chemical intermediate Additive Industrial application
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1.3. Details of the supplier of the safety data sheet**Supplier**

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address	SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone	SGS - +32 (0)3 575 55 55 (24h)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified

EUH210 - Safety data sheet available on request

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
TRIETHANOLAMINE E 102-71-6	90 - 100%	203-049-8	-	Not classified	-	-	-
2,2'-IMINODIETHANOL NOL 111-42-2	<= 0.5%	203-868-0 (603-071-00-1)	-	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Repr. 2 (H361fd) STOT RE 2 (H373)	-	-	-

Full text of H- and EUH-phrases: see section 16This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation**

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists. Wash contaminated

clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed**Eyes**

May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed**Note to doctors**

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable Extinguishing Media**

Dry chemical, CO₂, alcohol-resistant foam or water spray.

Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture**Specific hazards arising from the chemical**

Exposure to combustion products may be a hazard to health.

Hazardous combustion products

Carbon oxides. Nitrogen oxides (NO_x).

5.3. Advice for firefighters**Special protective equipment and precautions for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Collect contaminated fire extinguishing water separately. Do not allow it to enter drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****Personal precautions**

No action shall be taken involving any personal risk or without suitable training. Ensure adequate ventilation. Avoid contact with eyes and skin. Do not touch or walk through spilled material. Keep unnecessary and unprotected personnel from entering. Use personal protection recommended in Section 8.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not allow runoff to sewer, waterway or ground. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment	Do not absorb in sawdust or other combustible absorbents. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for cleaning up	Clean contaminated objects and areas thoroughly observing environmental regulations.
Prevention of secondary hazards	Observe good chemical hygiene practices.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Use only with adequate ventilation. Handle all packages and containers carefully to minimise spills. Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Since emptied containers retain product residue, follow all SDS and label warnings even after container is emptied.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Remove contaminated clothing and protective equipment before entering eating areas. Wash hands before breaks and immediately after handling the product. Take off all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Keep in properly labelled containers. Store away from incompatible materials. Strong oxidising agents. Strong acids. Strong bases. Combustible liquid. Keep from freezing.
Packaging materials	Unsuitable container/equipment material. Aluminium. copper. Copper alloys. Galvanized containers. Zinc.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM)	The information required is contained in this Safety Data Sheet.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits	2,2'-Iminodiethanol TWA: 0.2 mg/m ³ * (Manuf. data).
Biological occupational exposure limits	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
Information on monitoring	Refer to European Standard EN 689 (Workplace atmospheres - Guidance for the

procedures

assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) or equivalent national standard(s). Refer to European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) or equivalent national standard(s). Refer to European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) or equivalent national standard(s).

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
TRIETHANOLAMINE 102-71-6		6.3 mg/kg [4] [6]	5 mg/m ³ [5] [6]
2,2'-IMINODIETHANOL 111-42-2		0.13 mg/kg bw/day [4] [6]	0.75 mg/m ³ [4] [6] 0.5 mg/m ³ [5] [6]

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
TRIETHANOLAMINE 102-71-6	13 mg/kg [4] [6]	3.1 mg/kg [4] [6]	1.25 mg/m ³ [5] [6]
2,2'-IMINODIETHANOL 111-42-2	0.06 mg/kg bw/day [4] [6]		0.125 mg/m ³ [4] [6] 0.125 mg/m ³ [5] [6]

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
TRIETHANOLAMINE 102-71-6	0.32 mg/l	5.12 mg/L	0.032 mg/l		
2,2'-IMINODIETHANOL 111-42-2	0.021 mg/L	0.095 mg/L	0.002 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
TRIETHANOLAMINE 102-71-6	1.7 mg/kg	0.17 mg/kg	10 mg/L	0.151 mg/kg	
2,2'-IMINODIETHANOL 111-42-2	0.092 mg/kg sediment dw	0.0092 mg/kg sediment dw	100 mg/L	1.63 mg/kg soil dw	1.04 mg/kg food

8.2. Exposure controls**Engineering controls**

Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location. Use engineering controls to keep exposures below the OEL or DNEL.

Personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles). According to EN 16321-1.

Hand protection

Chemical resistant gloves required for prolonged or repeated contact. Gloves must conform to standard EN 374. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves should be removed and replaced if there are any signs of degradation or breakthrough. Examples of preferred glove barrier materials include: Polyethylene (PE). Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Chlorinated polyethylene (CPE). Nitrile rubber. Polyvinyl alcohol (PVA).

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated) Protection index ≥ 5	Polyethylene (PE) Ethyl vinyl alcohol laminate ("EVAL") Chlorinated polyethylene (CPE) Nitrile rubber Polyvinyl alcohol (PVA)	> 0.35 mm	> 240 minutes
Short term Protection index ≥ 3	Polyethylene (PE) Ethyl vinyl alcohol laminate ("EVAL") Chlorinated polyethylene (CPE) Nitrile rubber Polyvinyl alcohol (PVA)	> 0.35 mm	> 60 minutes

Skin and body protection

Wear appropriate clothing to prevent reasonably probable skin contact. Chemical-resistant protective suit. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection**Recommended filter type:**

In case of inadequate ventilation wear respiratory protection.
Organic gases and vapours filter conforming to EN 14387.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Remove contaminated clothing and protective equipment before entering eating areas. Wash hands before breaks and immediately after handling the product. Take off all contaminated clothing and wash it before reuse.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	Liquid
Colour	Colourless To yellow
Odour	Ammoniacal.
Odour threshold	No information available

Property**Values**

Melting point / freezing point	20.5 °C
Initial boiling point and boiling range	336.1 °C
Flammability	

Remarks • Method

@ 1013 hPa.
Not expected to be a static-accumulating flammable liquid.

Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	179 °C	Closed cup.
Autoignition temperature	324 °C	No information available.
Decomposition temperature		Not determined.
pH		No information available.
pH (as aqueous solution)	10.3	solution (0.1 %).
Kinematic viscosity		No data available.
Dynamic viscosity	934 mPa s	@ 20 °C.
Water solubility	Completely soluble > 1000 g/l	@ 20 °C.
Solubility(ies)		No information available.
Partition coefficient		Not determined.
Vapour pressure	< 0.0003 hPa	@ 21 °C.
Relative density	1.126	@ 20 °C.
Bulk density		No information available
Liquid Density	1.125 g/cm ³	@ 20 °C
Relative vapour density	5	Air. = 1.
Particle characteristics		Not applicable.
Particle Size	.	
Particle Size Distribution	.	
Explosive properties	No information available	
Oxidising properties	No information available	
9.2. Other information		
Molecular weight	149.19	
Evaporation rate	0.01 (n-butyl acetate=1)	

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No reactive hazards known/expected.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react with the product:. Strong oxidising agents.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials Heating above 60°C in the presence of aluminum can result in corrosion and generation of flammable hydrogen gas. Avoid contact with:. Oxidising agents. Acids. Halogenated hydrocarbons. Nitrites. Combustible liquid. Aluminium. Copper. Galvanised metals. Zinc.

10.6. Hazardous decomposition products

Hazardous decomposition products Decomposition products depend upon temperature, air supply and the presence of other materials.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	At room temperature, exposure to vapour is minimal due to low volatility; single exposure is not likely to be hazardous.
Eye contact	May cause slight eye irritation. Corneal injury is unlikely.
Skin contact	Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated exposure to skin may cause irritation, even a burn.
Ingestion	Low toxicity by ingestion. No harmful effects expected in amounts likely to be ingested by accident.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause slight eye irritation. Prolonged contact may cause skin irritation.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
TRIETHANOLAMINE	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-
2,2'-IMINODIETHANOL	= 1600 mg/kg (Rat)	> 8200 mg/kg (Rabbit)	= 3.35 mg/l (Rat) 4h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data the classification criteria are not met.

TRIETHANOLAMINE (102-71-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Brief contact is essentially non-irritating to skin.

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal			Irritant

Serious eye damage/eye irritation Based on available data the classification criteria are not met.

TRIETHANOLAMINE (102-71-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
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					May cause slight eye irritation
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2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	eye			Severe eye irritation

Respiratory or skin sensitisation Based on available data the classification criteria are not met.

TRIETHANOLAMINE (102-71-6)

Method	Species	Exposure route	Results
			Skin contact may cause an allergic skin reaction in a small proportion of individuals

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity Based on available data the classification criteria are not met.

Component Information

TRIETHANOLAMINE (102-71-6)

Method	Species	Results
	in vitro	Negative

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Results
	in vitro	Negative

Carcinogenicity Based on available data the classification criteria are not met.

Component Information

TRIETHANOLAMINE (102-71-6)

Method	Species	Results
		Not Carcinogenic

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Results
		Not Carcinogenic

Reproductive toxicity Based on available data the classification criteria are not met.

TRIETHANOLAMINE (102-71-6)

Method	Species	Results
		Not classified

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Results
		Not classified

STOT - single exposure

Based on available data the classification criteria are not met.

TRIETHANOLAMINE (102-71-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Evaluation of available data suggests that this material is not an STOT-SE toxicant

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Evaluation of available data suggests that this material is not an STOT-SE toxicant

STOT - repeated exposure

Based on available data the classification criteria are not met.

Component Information

TRIETHANOLAMINE (102-71-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Based on available data, a STOT-RE classification is not warranted.

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In animals, effects have been reported on the following organs: Kidney Liver Heart Central nervous system

Aspiration hazard

Based on available data the classification criteria are not met.

Other adverse effects

No information available.

SECTION 12: Ecological information**12.1. Toxicity****Ecotoxicity**

Based on available data, the classification criteria are not met.

TRIETHANOLAMINE (102-71-6)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
Acute toxicity	Pimephales promelas	LC50	11800 mg/L	96 hours	Calculation method
ASTM E1192	Ceriodaphnia dubia	EC50	609.88 mg/L	48 hours	
DIN 38412 Part 9	Desmodesmus subspicatus	ErC50	216 - 512 mg/L	72 hours	

2,2'-IMINODIETHANOL (111-42-2)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Pimephales promelas	LC50	1460 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	55 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	ErC50	2.2 mg/L	96 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	EC10	1.1 mg/L	72 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	EC50	> 1000 mg/L	3 hours	
Chronic toxicity	Daphnia magna	EC10	1.05 mg/L	21 days	

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable.

TRIETHANOLAMINE (102-71-6)

Method	Exposure time	Value	Results
			Readily biodegradable

2,2'-IMINODIETHANOL (111-42-2)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	93% Biodegradation	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
TRIETHANOLAMINE	-2.53
2,2'-IMINODIETHANOL	-2.46

12.4. Mobility in soil

Mobility in soil Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
TRIETHANOLAMINE	The substance is not PBT / vPvB
2,2'-IMINODIETHANOL	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.
Contaminated packaging	Do not reuse empty containers. Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations**Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Product restricted per REACH Annex XVII: 3

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
2,2'-IMINODIETHANOL - 111-42-2	75	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment**Chemical Safety Report**

No Chemical Safety Assessment has been carried out for this substance/mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet**Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

Legend

SVHC: Substances of Very High Concern for Authorisation:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

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Skin designation

+ Sensitisers

Revision Note **SDS sections updated 1 2 3 4 5 6 7 8 9 10 11 12 13 15 16****Classification procedure**

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Method Used

Acute oral toxicity

Calculation method

Acute dermal toxicity

Calculation method

Acute inhalation toxicity - gas

Calculation method

Acute inhalation toxicity - vapour

Calculation method

Acute inhalation toxicity - dust/mist

Calculation method

Skin corrosion/irritation

Calculation method

Serious eye damage/eye irritation

Calculation method

Respiratory sensitisation

Calculation method

Skin sensitisation

Calculation method

Mutagenicity

Calculation method

Carcinogenicity

Calculation method

Reproductive toxicity

Calculation method

STOT - single exposure

Calculation method

STOT - repeated exposure

Calculation method

Acute aquatic toxicity

Calculation method

Chronic aquatic toxicity

Calculation method

Aspiration hazard

Calculation method

Ozone

Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By J Forth
Supersedes date 24-Jul-2023
Revision date 09-Dec-2025

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet