

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

Supersedes date 20-Mar-2022

Revision date 02-Dec-2025

Revision Number 4

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

1.1. Product identifier

Product Code(s) 11949

Safety data sheet number 11949

Product Name MAXISTAB DM 4N STABILIZER

Synonyms MAXISTAB DM 4N

Pure substance/mixture Mixture

Contains HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS; 4-METHYLMORPHOLINE; 2,4-DI-TERT-BUTYLPHENOL; BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE; TRIETHYLAMINE

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

Recommended use Stabilizer Concentrate
Industrial use

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)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flammable liquids	Category 3 - (H226)
Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Inhalation (Vapours)	Category 4 - (H332)
Skin corrosion/irritation	Category 1 Sub-category B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

Specific target organ toxicity — single exposure	Category 3 - (H335)
Category 3 Respiratory irritation	
Aspiration hazard	Category 1 - (H304)
Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label elements

Contains HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS; 4-METHYLMORPHOLINE; 2,4-DI-TERT-BUTYLPHENOL; BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE; TRIETHYLAMINE



Signal word

Danger

Hazard statements

H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H314 - Causes severe skin burns and eye damage
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H411 - Toxic to aquatic life with long lasting effects
H226 - Flammable liquid and vapour

Precautionary statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
P305 + P351 + P338 - IF 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 or doctor

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

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)

HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS 1174522-19-0	>= 50 - < 70%	919-029-3	-	Asp. Tox. 1 (H304) (EUH066)	-	-	-
4-METHYLMORPH OLINE 109-02-4	>= 10 - < 25%	203-640-0	-	Flam. Liq. 2 (H225) Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318)	-	-	-
2,4-DI-TERT-BUTY LPHENOL 96-76-4	>= 10 - < 25%	202-532-0	-	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	-	-
BIS(2-DIMETHYLA MINOETHYL)(MET HYL)AMINE 3030-47-5	>= 5 - < 10%	221-201-1 (612-109-00 -6)	-	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Aquatic Chronic 3 (H412)	-	-	-
TRIETHYLAMINE 121-44-8	< 5%	204-469-4 (612-004-00 -5)	-	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1A (H314) Eye Dam. 1 (H318) STOT SE 3 (H335)	STOT SE 3 :: C>=1%	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
Skin contact	Wash off immediately with plenty of water. Get immediate medical attention.
Ingestion	Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit does not enter the lungs. Aspiration into lungs can produce severe lung damage. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapours or mists.

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

Inhalation Coughing and/or wheezing. Difficulty in breathing.

Eyes Burning sensation. Exposure to amine vapours may temporarily restrict sight.

Dermal Burning sensation. Erythema (skin redness).

Ingestion Aspiration risk: may cause lung damage if swallowed

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

Note to doctors Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Because of the danger of aspiration, emesis or gastric lavage should not be used unless the risk is justified by the presence of additional toxic substances. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

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 Closed containers can burst violently when heated, due to excess pressure build-up. Exposure to combustion products may be a hazard to health. The product will float on water and can be reignited on surface water.

Hazardous combustion products Carbon dioxide (CO₂). Carbon monoxide. Nitrogen oxides (NO_x). Phenols.

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. Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

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. Avoid contact with skin, eyes and inhalation of vapours. Remove all sources of ignition. Do not touch or walk through spilled material. Keep unnecessary and unprotected personnel from entering. Keep people away from and upwind of spill/leak. Use personal protection recommended in Section 8.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 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.
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6.3. Methods and material for containment and cleaning up

Methods for containment	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). Use non sparking handtools and explosion-proof electric equipment. The spill may be covered with alcohol resistant foam to reduce evaporation.
Methods for cleaning up	Take precautionary measures against static discharges. Clean contaminated objects and areas thoroughly observing environmental regulations. Use non-sparking tools.
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	Provide good room ventilation even at ground level (vapours are heavier than air). Avoid contact with skin, eyes and inhalation of vapours. Ensure that eyewash stations and safety showers are close to the workstation location. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Use personal protection recommended in Section 8.
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 containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Protect from direct sunlight. Keep away from food, drink and animal feedingstuffs. Store away from incompatible materials. Oxidising agents. Keep/store only in original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Packaging materials	Unsuitable container/equipment material. Steel. copper. Copper alloys. Galvanized iron. Galvanized steel.

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.**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure Limits**

Chemical name	United Kingdom
TRIETHYLAMINE 121-44-8	TWA: 2 ppm TWA: 8 mg/m ³ STEL: 4 ppm STEL: 17 mg/m ³ Sk*

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS 1174522-19-0		2.91 mg/kg bw/day [4] [6]	16.4 mg/m ³ [4] [6] 5002.67 mg/m ³ [4] [7]
4-METHYLMORPHOLINE 109-02-4		1.11 mg/kg bw/day [4] [6]	1.3 mg/m ³ [4] [6]
BIS(2-DIMETHYLAMINOETHYL)(MET HYL)AMINE 3030-47-5		0.3 mg/kg/day [4] [6]	1058 mg/m ³ [4] [6]
TRIETHYLAMINE 121-44-8		12.1 mg/kg/day [4] [6]	12.6 mg/m ³ [5] [7] 12.6 mg/m ³ [4] [7] 8.4 mg/m ³ [5] [6] 8.4 mg/m ³ [4] [6]

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

[7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS 1174522-19-0	1.25 mg/kg bw/day [4] [6]	1.25 mg/kg bw/day [4] [6]	4.85 mg/m ³ [4] [6] 3001.6 mg/m ³ [4] [7]
4-METHYLMORPHOLINE 109-02-4	0.67 mg/kg bw/day [4] [6]		0.39 mg/m ³ [4] [6]
BIS(2-DIMETHYLAMINOETHYL)(MET HYL)AMINE	0.15 mg/kg/day [4] [6]	0.15 mg/kg/day [4] [6]	0.261 mg/m ³ [4] [6]

Chemical name	Oral	Dermal	Inhalation
3030-47-5			

[4]	Systemic health effects.
[6]	Long term.
[7]	Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
4-METHYLMORPHOLINE 109-02-4	1.2 mg/L	12 mg/L	0.12 mg/L		
BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE 3030-47-5	0.055 mg/l		0.005 mg/l		
TRIETHYLAMINE 121-44-8	0.11 mg/l	0.08 mg/L	0.011 mg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
4-METHYLMORPHOLINE 109-02-4	54 mg/kg sediment dw	5.4 mg/kg sediment dw	100 mg/L	10.1 mg/kg soil dw	6.67 mg/kg food
BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE 3030-47-5	0.398 mg/kg	0.04 mg/kg		0.047 mg/kg	100 mg/l
TRIETHYLAMINE 121-44-8	1.575 mg/kg	0.158 mg/kg	100 mg/L	0.25 mg/kg	

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 acceptable glove barrier materials include: Chlorinated polyethylene (CPE). Polyethylene (PE). Ethyl vinyl alcohol laminate ("EVAL"). Viton™. Polyvinyl alcohol (PVA). Neoprene gloves. Nitrile rubber. Polyvinyl chloride (PVC).

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Short term	Chlorinated polyethylene (CPE) Polyethylene (PE) Ethyl vinyl alcohol laminate	> 0.35 mm	> 60 minutes

	("EVAL") Viton™ Polyvinyl alcohol (PVA) Neoprene gloves Nitrile rubber Polyvinyl chloride (PVC)		
Long term (repeated)	Chlorinated polyethylene (CPE) Polyethylene (PE) Ethyl vinyl alcohol laminate ("EVAL") Viton™ Polyvinyl alcohol (PVA) Neoprene gloves Nitrile rubber Polyvinyl chloride (PVC)	> 0.35 mm	> 480 minutes

Skin and body protection	Wear appropriate clothing to prevent reasonably probable skin contact. Chemical-resistant protective suit.
Respiratory protection Recommended filter type:	In case of inadequate ventilation wear respiratory protection. Type AP2.
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	Amine-like.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	< -6 °C	No information available.
Initial boiling point and boiling range	89 - 320 °C	No information available.
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	23 °C	Closed cup. (ASTM D93).
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		Substance/mixture is non-polar/aprotic.
pH (as aqueous solution)		No information available.
Kinematic viscosity	5.23 mm²/s	@ 20 °C.
Dynamic viscosity		No information available.
Water solubility	partially soluble 30%	No information available.
Solubility(ies)		No information available.
Partition coefficient		No information available.

Vapour pressure	1 kPa	@ 20 °C.
Relative density	0.85	@ 20 °C.
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density	>1	@ 20 °C.
Particle characteristics		Not applicable.
Particle Size	.	
Particle Size Distribution	.	
Explosive properties	No information available	
Oxidising properties	No information available	
9.2. Other information		
VOC content	44.95%	

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under recommended storage conditions. See section 7 for more information.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid static discharge (electrostatic discharge). Product may decompose at elevated temperatures.

10.5. Incompatible materials

Incompatible materials Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Ammonia.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Harmful if inhaled. May cause respiratory irritation.

Eye contact Causes serious eye damage.

Skin contact Causes severe burns.

Ingestion

Harmful if swallowed. May be fatal if swallowed and enters airways. Potential for aspiration if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Coughing and/ or wheezing. Difficulty in breathing. Erythema (skin redness). Burning sensation. Exposure to amine vapours may temporarily restrict sight. Risk of chemical pneumonia after aspiration.

Acute toxicity**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1487.05 mg/kg
 ATEmix (dermal) > 2000 mg/kg
 ATEmix (inhalation-vapour) 19.0454 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS	> 5000 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	> 5266 mg/m ³ (Rat) 4h
4-METHYLMORPHOLINE	= 1442 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE	= 1330 mg/kg (Rat)	200 - 1000 mg/kg (Rabbit)	= 2.06 mg/l (Rat) 4h
TRIETHYLAMINE	= 100 mg/kg (Rat)	= 300 mg/kg (Rabbit)	= 7.2 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

4-METHYLMORPHOLINE (109-02-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Corrosive

BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE (3030-47-5)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Corrosive

TRIETHYLAMINE (121-44-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal		1 minutes	Causes severe burns

Serious eye damage/eye irritation

Causes serious eye damage.

4-METHYLMORPHOLINE (109-02-4)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Corrosive

BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE (3030-47-5)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Irreversible damage

TRIETHYLAMINE (121-44-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	eye			Causes serious eye damage

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

4-METHYLMORPHOLINE (109-02-4)

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

BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE (3030-47-5)

Method	Species	Exposure route	Results
OECD Test No. 429: Skin Sensitization	Mouse	Dermal	Not a skin sensitiser

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

Component Information

TRIETHYLAMINE (121-44-8)

Method	Species	Results
		Did not show mutagenic effects in animal experiments

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

Component Information

HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS (1174522-19-0)

Method	Species	Results
		The classification as a carcinogen need not apply if the refining history is known and does not contain carcinogens

TRIETHYLAMINE (121-44-8)

Method	Species	Results
		Did not cause cancer in laboratory animals.

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

STOT - single exposure May cause respiratory irritation.

TRIETHYLAMINE (121-44-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
		Inhalation			May cause respiratory irritation

STOT - repeated exposure

Based on available data the classification criteria are not met.

Component Information
TRIETHYLAMINE (121-44-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rat	Inhalation	1020 mg/m ³	196 days	Not classified

Aspiration hazard

May be fatal if swallowed and enters airways.

Other adverse effects

No information available.

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

Toxic to aquatic life with long lasting effects.

HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS (1174522-19-0)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
Acute toxicity	Fish	LC50	2 - 100 mg/L	96 hours	
Acute toxicity	Crustacea	EC50	2 - 100 mg/L	48 hours	
Acute toxicity	Algae	EC50	2 - 100 mg/L	72 hours	

4-METHYLMORPHOLINE (109-02-4)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
DIN 38412 Part 15,	Leuciscus idus	LC50	316 - 464 mg/L	96 hours	
Directive 79/831/EEC, static	Daphnia magna	EC50	> 100 mg/L	48 hours	
OECD Test No. 211: Daphnia magna Reproduction Test	Daphnia magna	NOEC	> 100 mg/L	21 days	
DIN 38412 Part 9	Desmodesmus subspicatus	EC50	291.2 mg/L	72 hours	Read-across

BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE (3030-47-5)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	LC50	157 mg/L	96 hours	
EU Method C.2	Daphnia magna	EC50	54.9 mg/L	48 hours	
EU Method C.3	Desmodesmus subspicatus	ErC50	78.3 mg/L	72 hours	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	NOEC	> 1000 mg/L	30 minutes	

TRIETHYLAMINE (121-44-8)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Oryzias latipes (Ricefish)	LC50	24 mg/L	96 hours	
	Water flea	LC50	17 mg/L	48 hours	
	Desmodesmus subspicatus	EC50	24.8 mg/L	96 hours	
	Pseudomonas	EC50	95 mg/L	17 hours	

	putida				
	Oncorhynchus mykiss (rainbow trout)	NOEC	3.2 mg/L	60 days	
	Daphnia magna	NOEC	11 mg/L	21 days	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
TRIETHYLAMINE	-	LC50: =43.7mg/L (96h, Pimephales promelas)	-	EC50: =200mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability The product contains substances which are biodegradable.

4-METHYLMORPHOLINE (109-02-4)

Method	Exposure time	Value	Results
OECD Test No. 302B: Inherent Biodegradability: Zahn-Wellens/ EVPA Test	28 days	91% Biodegradation	Readily biodegradable

BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE (3030-47-5)

Method	Exposure time	Value	Results
OECD Test No. 301E: Ready Biodegradability: Modified OECD Screening Test (TG 301 E)	28 days	< 10% Biodegradation	Not readily biodegradable

TRIETHYLAMINE (121-44-8)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	84.9% Biodegradation	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
4-METHYLMORPHOLINE	-0.32
BIS(2-DIMETHYLAMINOETHYL)(METHYL)AMINE	-2.1
TRIETHYLAMINE	1.45

12.4. Mobility in soil

Mobility in soil partially soluble.

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
HYDROCARBONS, C16-C20, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS	The substance is not PBT / vPvB
4-METHYLMORPHOLINE	The substance is not PBT / vPvB
TRIETHYLAMINE	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 is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. 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	UN2734
14.2 UN proper shipping name	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (4-METHYLMORPHOLINE, 2,4-DI-TERT-BUTYLPHENOL)
14.3 Transport hazard class(es)	8
Subsidiary hazard class	3
14.4 Packing group	II
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	None
ERG Code	8F

IMDG

14.1 UN number or ID number	UN2734
14.2 UN proper shipping name	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (4-METHYLMORPHOLINE, 2,4-DI-TERT-BUTYLPHENOL)
14.3 Transport hazard class(es)	8
Subsidiary hazard class	3
14.4 Packing group	II
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274
EmS-No	F-E, S-C
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN2734
14.2 UN proper shipping name	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (4-METHYLMORPHOLINE, 2,4-DI-TERT-BUTYLPHENOL)
14.3 Transport hazard class(es)	8
Subsidiary hazard class	3
14.4 Packing group	II
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274
Classification code	CF1

ADR

14.1 UN number or ID number	UN2734
14.2 UN proper shipping name	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (4-METHYLMORPHOLINE, 2,4-DI-TERT-BUTYLPHENOL)

14.3 Transport hazard class(es)	8
Subsidiary hazard class	3
14.4 Packing group	II
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274
Classification code	CF1
Tunnel restriction code	(D/E)

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
TRIETHYLAMINE - 121-44-8	75	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

P5c - FLAMMABLE LIQUIDS

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/NDSL - 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**

EUH066 - Repeated exposure may cause skin dryness or cracking
H225 - Highly flammable liquid and vapour
H301 - Toxic if swallowed
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H318 - Causes serious eye damage
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects

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	*	Skin designation
+	Sensitisers		

Revision Note **SDS sections updated 1 2 3 4 5 6 7 8 9 10 11 12 13 14 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
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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