Supercut 4000

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Reference number: 21510
Issue date: 09/08/2023 Revision date: 09/08/2023 Version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	Supercut 4000
Product code	:	7172
Type of product	:	Metal Working Fluid - Water Soluble
Product group	:	End product

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

1.2.1. Relevant identified uses

Main use category	:	Industrial use,Professional use
Function or use category	:	Metalworking Fluid

Title	Life cycle stage	Use descriptors
(Industrial) Handling and dilution of metalworking fluid concentrates	Industrial	SU3, PC25, PROC5, PROC8b, ERC2

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
Morris Lubricants
Castle Foregate
SY1 2EL Shrewsbury – Shropshire
United Kingdom
T +44 (0) 1743 232200
sds@morris-lubricants.co.uk

1.4. Emergency telephone number

Emergency number	:	+44 (0) 1743 232200 08.45 - 17.00 GMT

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

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

Adverse physicochemical, human health and environmental effects

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS05 GHS07

Signal word (CLP) : Danger

Contains : 1,2-benzisothiazol-3(2H)-one; 3-iodo-2-propynyl butylcarbamate; Alkyl ether carboxylic acid; 2-phenoxyethanol; 2-methylpentane-1,5-diamine; Poly(oxy-1,2-ethanediyl), .alpha.-(carboxymethyl)-.omega.-(octyloxy)- (4-11 EO)

Hazard statements (CLP) : H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) : P261 - Avoid breathing mist, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective clothing, eye protection, face protection.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 - Dispose of contents and container to a hazardous or special waste collection point.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrotreated Heavy Naphthenic Distillate substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 64742-52-5 EC-No.: 265-155-0 EC Index-No.: 649-465-00-7 REACH-no: 01-2119467170-45	≥ 30 – < 50	Not classified
	CAS-No.: 93-83-4 EC-No.: 700-972-2 REACH-no: 01-2119968565-22	≥ 5 – < 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
2,2 Nitrilotriethanol substance with national workplace exposure limit(s) (NO)	CAS-No.: 102-71-6 EC-No.: 203-049-8 REACH-no: 01-2119486482-31	≥ 5 – < 10	Acute Tox. 4 (Dermal), H312 (ATE=2000 mg/kg bodyweight)
Poly(oxy-1,2-ethanediyl), .alpha.-(carboxymethyl)-.omega.-(octyloxy)- (4-11 EO)	CAS-No.: 53563-70-5	≥ 1 – < 5	Eye Dam. 1, H318

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-methylpentane-1,5-diamine	CAS-No.: 15520-10-2 EC-No.: 239-556-6 REACH-no: 01-2119976310-41	≥ 1 – < 5	Acute Tox. 4 (Oral), H302 (ATE=1170 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1870 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335
2-phenoxyethanol	CAS-No.: 122-99-6 EC-No.: 204-589-7 EC Index-No.: 603-098-00-9 REACH-no: 01-2119488943-21	≥ 1 – < 5	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Eye Dam. 1, H318 STOT SE 3, H335
N-N-Bis(2-hydroxyethyl)oleamide	CAS-No.: 93-83-4 EC-No.: 202-281-7 REACH-no: 01-2120785132-57	≥ 1 – < 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411 (M=10)
Alkyl ether carboxylic acid	-	≥ 1 – < 5	Skin Irrit. 2, H315 Eye Dam. 1, H318
2,2'-iminodiethanol substance with national workplace exposure limit(s) (NO)	CAS-No.: 111-42-2 EC-No.: 203-868-0 EC Index-No.: 603-071-00-1 REACH-no: 01-2119488930-28	≥ 0.1 – < 1	Acute Tox. 4 (Oral), H302 (ATE=1600 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT RE 2, H373
Alcohols, C11-C14	CAS-No.: 68526-86-3 EC-No.: 271-235-6 REACH-no: 01-2119454259-32	≥ 0.1 – < 1	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
2-aminoethanol substance with national workplace exposure limit(s) (GB, NO); substance with a Community workplace exposure limit	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8 REACH-no: 01-2119486455-28	≥ 0.1 – < 1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412
2-(2-butoxyethoxy)ethanol substance with national workplace exposure limit(s) (GB, NO); substance with a Community workplace exposure limit	CAS-No.: 112-34-5 EC-No.: 203-961-6 EC Index-No.: 603-096-00-8 REACH-no: 01-2119475104-44	≥ 0.1 – < 1	Eye Irrit. 2, H319
3-iodo-2-propynyl butylcarbamate	CAS-No.: 55406-53-6 EC-No.: 259-627-5 EC Index-No.: 616-212-00-7 REACH-no: 01-2120762115-60	≥ 0.1 – < 1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 3 (Inhalation), H331 (ATE=0.5 mg/l/4h) Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 1, H372 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2-benzisothiazol-3(2H)-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60	≥ 0.1 – < 1	Acute Tox. 4 (Oral), H302 (ATE=1020 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400
Fatty acids, C16-18	CAS-No.: 67701-03-5 EC-No.: 266-928-5 REACH-no: 01-2119543709-29	≥ 0.1 – < 1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Propane-1,2-diol substance with national workplace exposure limit(s) (GB, NO)	CAS-No.: 57-55-6 EC-No.: 200-338-0 REACH-no: 01-2119456809-23	≥ 0.1 – < 1	Not classified

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
2-aminoethanol	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8 REACH-no: 01-2119486455-28	(5 ≤ C ≤ 100) STOT SE 3, H335
1,2-benzisothiazol-3(2H)-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60	(0.05 ≤ C ≤ 100) Skin Sens. 1, H317

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention. If 'in use' metalworking fluid emulsion give rise to irritation or skin rashes, possible contamination and/or usage conditions may need to be investigated.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Do not induce vomiting. Rinse mouth out with water. Drink a few glasses of water or milk. Product contains petroleum based material, which, if aspirated into the lungs may result in chemical pneumonia. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If aspiration into lungs occurs,admit to hospital immediately.

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

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Nitrogen oxides (NOx). Sulphur oxides (SOx). Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Firefighting instructions : Cool laterally with water containers exposed to flames, even after the fire is extinguished.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing spray, mist.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Do not touch or walk on the spilled product.
Methods for cleaning up : Take up liquid spill into absorbent material. Collect leaking and spilled liquid in sealable containers as far as possible. Clean contaminated surfaces with an excess of water. This material and its container must be disposed of in a safe way, and as per local legislation.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing mist, spray.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Protect against frost.
Storage temperature : 5 – 25 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Hydrotreated Heavy Naphthenic Distillate (64742-52-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m³
IOEL STEL	10 mg/m³
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5 mg/m³
WEL STEL (OEL STEL)	10 mg/m³

Propane-1,2-diol (57-55-6)	
United Kingdom - Occupational Exposure Limits	
Local name	Propane-1,2-diol
WEL TWA (OEL TWA) [1]	10 mg/m³ particulates 474 mg/m³ total vapour and particulates
WEL TWA (OEL TWA) [2]	150 ppm total vapour and particulates
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

2-aminoethanol (141-43-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Aminoethanol
IOEL TWA	2.5 mg/m³
IOEL TWA [ppm]	1 ppm
IOEL STEL	7.6 mg/m³
IOEL STEL [ppm]	3 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
United Kingdom - Occupational Exposure Limits	
Local name	2-Aminoethanol
WEL TWA (OEL TWA) [1]	2.5 mg/m³
WEL TWA (OEL TWA) [2]	1 ppm
WEL STEL (OEL STEL)	7.6 mg/m³
WEL STEL (OEL STEL) [ppm]	3 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

2-(2-butoxyethoxy)ethanol (112-34-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-(2-Butoxyethoxy)ethanol
IOEL TWA	67.5 mg/m³
IOEL TWA [ppm]	10 ppm

2-(2-butoxyethoxy)ethanol (112-34-5)	
IOEL STEL	101.2 mg/m³
IOEL STEL [ppm]	15 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
United Kingdom - Occupational Exposure Limits	
Local name	2-(2-Butoxyethoxy)ethanol
WEL TWA (OEL TWA) [1]	67.5 mg/m³
WEL TWA (OEL TWA) [2]	10 ppm
WEL STEL (OEL STEL)	101.2 mg/m³
WEL STEL (OEL STEL) [ppm]	15 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

Monitoring methods	
Monitoring methods	Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station. Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.
Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Safety glasses	Droplet	With side shields	

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Hand protection:
Protective gloves

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Disposable gloves	Nitrile rubber (NBR)		>0.35		EN 420, EN 374-2, EN 374-3

8.2.2.3. Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. For protection against metal working fluids, respiratory protection that is classified as “resistant to oil” (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m3), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m3). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

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
Colour	:	Fluorescent. Green.
Appearance	:	Liquid.
Odour	:	Not available
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not flammable
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	> 100 °C
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	9.4
pH solution concentration	:	5 %
Viscosity, kinematic @ 40°C	:	Not available

Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	0.98
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

2,2'-iminodiethanol (111-42-2)	
LD50 oral rat	1600 mg/kg Source: ECHA

1,2-benzisothiazol-3(2H)-one (2634-33-5)	
LD50 oral rat	1020 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Hydrotreated Heavy Naphthenic Distillate (64742-52-5)	
LD50 oral rat	> 5000 mg/kg Source: IUCLID
LD50 dermal rabbit	> 5000 mg/kg

2,2 Nitrilotriethanol (102-71-6)	
LD50 oral rat	4200 – 11300 mg/kg
LD50 dermal rabbit	2000 mg/kg

N-N-Bis(2-hydroxyethyl)oleamide (93-83-4)	
LD50 oral rat	12400 mg/kg Source: National Library of Medicine

3-iodo-2-propynyl butylcarbamate (55406-53-6)	
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EPA OPP 81-2 (Acute Dermal Toxicity), Remarks on results: not determinable due to absence of adverse toxic effects

Propane-1,2-diol (57-55-6)	
LD50 oral rat	22000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 44.9 mg/l/4h Animal: rat, Guideline: other:, Remarks on results: other:

Fatty acids, C16-18 (67701-03-5)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure)

Alcohols, C11-C14 (68526-86-3)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:

2-(2-butoxyethoxy)ethanol (112-34-5)	
LD50 dermal rabbit	2764 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 2090 - 3645

2-phenoxyethanol (122-99-6)	
LD50 dermal rat	14391 mg/kg bodyweight Animal: rat, Remarks on results: other:
LD50 dermal rabbit	> 2214 mg/kg bodyweight Animal: rabbit, Guideline: other:

2-methylpentane-1,5-diamine (15520-10-2)	
LD50 oral rat	1170 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:, 95% CL: 1000 - 1360
LD50 dermal rat	1870 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:, 95% CL: 1700 - 2050

(93-83-4)	
LD50 oral rat	10000 mg/kg bodyweight Animal: rat, Animal sex: male
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:

Skin corrosion/irritation : Causes skin irritation.
pH: 9.4

Additional information : Repeated exposure may cause skin dryness or cracking.

2,2'-iminodiethanol (111-42-2)	
pH	11 Source: HSDB

2,2 Nitrilotriethanol (102-71-6)	
pH	10.5

2-aminoethanol (141-43-5)	
pH	≈ 12

2-phenoxyethanol (122-99-6)	
pH	7

Serious eye damage/irritation : Causes serious eye damage.
pH: 9.4

2,2'-iminodiethanol (111-42-2)	
pH	11 Source: HSDB

2,2 Nitrilotriethanol (102-71-6)	
pH	10.5

2-aminoethanol (141-43-5)	
pH	≈ 12

2-phenoxyethanol (122-99-6)	
pH	7

Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

2,2'-iminodiethanol (111-42-2)	
IARC group	2B - Possibly carcinogenic to humans

2,2 Nitrilotriethanol (102-71-6)	
IARC group	3 - Not classifiable

2,2'-iminodiethanol (111-42-2)	
NOAEL (chronic, oral, animal/male, 2 years)	64 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies), Remarks on results: other:

Reproductive toxicity : Not classified

1,2-benzisothiazol-3(2H)-one (2634-33-5)	
NOAEL (animal/female, F1)	56.6 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)

Propane-1,2-diol (57-55-6)	
NOAEL (animal/female, F0/P)	10100 mg/kg bodyweight Mouse

2-phenoxyethanol (122-99-6)	
LOAEL (animal/male, F1)	≈ 1875 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: other:
LOAEL (animal/female, F1)	≈ 1875 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: other:

STOT-single exposure : Not classified

2-aminoethanol (141-43-5)	
STOT-single exposure	May cause respiratory irritation.

2-phenoxyethanol (122-99-6)	
STOT-single exposure	May cause respiratory irritation.

2-methylpentane-1,5-diamine (15520-10-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

2,2'-iminodiethanol (111-42-2)	
LOAEL (dermal, rat/rabbit, 90 days)	32 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.003 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Hydrotreated Heavy Naphthenic Distillate (64742-52-5)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	≈ 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

3-iodo-2-propynyl butylcarbamate (55406-53-6)	
LOAEL (dermal, rat/rabbit, 90 days)	500 mg/kg bodyweight Animal: rat, Guideline: EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days), Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
LOAEC (inhalation, rat,dust/mist/fume, 90 days)	0.0067 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (oral, rat, 90 days)	20 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEL (dermal, rat/rabbit, 90 days)	200 mg/kg bodyweight Animal: rat, Guideline: EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days), Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.00116 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
STOT-repeated exposure	Causes damage to organs (larynx) through prolonged or repeated exposure (if inhaled).

Propane-1,2-diol (57-55-6)	
NOAEL (oral, rat, 90 days)	1700 mg/kg bodyweight/day
NOAEL (subchronic, oral, animal/male, 90 days)	443 mg/kg bodyweight Animal: cat, Animal sex: male

Fatty acids, C16-18 (67701-03-5)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

2-(2-butoxyethoxy)ethanol (112-34-5)	
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)

2-phenoxyethanol (122-99-6)	
LOAEL (oral, rat, 90 days)	> 700 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
LOAEL (dermal, rat/rabbit, 90 days)	> 500 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

2-phenoxyethanol (122-99-6)	
NOAEL (dermal, rat/rabbit, 90 days)	500 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

2-methylpentane-1,5-diamine (15520-10-2)	
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

(93-83-4)	
LOAEL (dermal, rat/rabbit, 90 days)	50 mg/kg bodyweight Animal: rat
NOAEL (oral, rat, 90 days)	> 750 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified
Additional information : Although not classified, the product contains mineral oil. If aspirated into the lungs e.g. through vomiting after ingestion, admit to hospital immediately.

Hydrotreated Heavy Naphthenic Distillate (64742-52-5)	
Viscosity, kinematic @ 40°C	22 mm²/s @40C

2-aminoethanol (141-43-5)	
Viscosity, kinematic @ 40°C	22.725 mm²/s

Fatty acids, C16-18 (67701-03-5)	
Viscosity, kinematic @ 40°C	12 mm²/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm²/s)' Remarks on result: 'other:'

Alcohols, C11-C14 (68526-86-3)	
Viscosity, kinematic @ 40°C	48 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'

2-(2-butoxyethoxy)ethanol (112-34-5)	
Viscosity, kinematic @ 40°C	≈ 6.794 mm²/s

2-phenoxyethanol (122-99-6)	
Viscosity, kinematic @ 40°C	19.369 mm²/s

2-methylpentane-1,5-diamine (15520-10-2)	
Viscosity, kinematic @ 40°C	3.468 mm²/s

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Harmful to aquatic life with long lasting effects.
Not rapidly degradable

2,2'-iminodiethanol (111-42-2)	
LC50 - Fish [1]	460 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

2,2'-iminodiethanol (111-42-2)	
EC50 - Crustacea [1]	30.1 mg/l Source: ECHA
EC50 - Crustacea [2]	89.9 mg/l Test organisms (species): Ceriodaphnia dubia
EC50 72h - Algae [1]	9.5 mg/l Source: ECHA
LOEC (chronic)	1.56 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.78 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	> 1 mg/l Test organisms (species): other:

1,2-benzisothiazol-3(2H)-one (2634-33-5)	
LC50 - Fish [1]	2.18 mg/l Source: ECHA registration data
LC50 - Fish [2]	2.15 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	2.94 mg/l Source: ECHA registration data
EC50 - Crustacea [2]	2.9 mg/l Test organisms (species): Daphnia magna

Hydrotreated Heavy Naphthenic Distillate (64742-52-5)	
LC50 - Fish [1]	> 5000 mg/l Source: IUCLID
EC50 - Crustacea [1]	> 1000 mg/l Source: IUCLID
EC50 96h - Algae [1]	> 1000 mg/l Source: IUCLID

2,2 Nitrilotriethanol (102-71-6)	
LC50 - Fish [1]	11800 mg/l
EC50 - Crustacea [1]	609.98 mg/l
ErC50 algae	169 mg/l

N-N-Bis(2-hydroxyethyl)oleamide (93-83-4)	
LC50 - Fish [1]	1.5 mg/l Source: Chemical Risk Information Platform
EC50 - Crustacea [1]	0.05 mg/l Source: Chemical Risk Information Platform
EC50 72h - Algae [1]	35 mg/l Source: Chemical Risk Information Platform

Propane-1,2-diol (57-55-6)	
LC50 - Fish [1]	40613 mg/l Onchorhynchus mykiss (Rainbow trout)
LC50 - Fish [2]	51400 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	18340 mg/l Ceriodaphnia Dubia (water flea)
EC50 72h - Algae [1]	24200 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	19300 mg/l Test organisms (species): Skeletonema costatum
EC50 96h - Algae [1]	19000 mg/l Selenastrum capricornutum
EC50 96h - Algae [2]	19100 mg/l Skeletonema costatum
NOEC chronic fish	2500 mg/l
NOEC chronic crustacea	13020 mg/l

Fatty acids, C16-18 (67701-03-5)	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	> 4.8 mg/l Test organisms (species): Daphnia magna

Fatty acids, C16-18 (67701-03-5)	
EC50 72h - Algae [1]	> 0.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	> 0.22 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	> 0.22 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Alcohols, C11-C14 (68526-86-3)	
LC50 - Fish [1]	0.42 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 72h - Algae [1]	2.6 mg/l Test organisms (species): other:
EC50 72h - Algae [2]	3.2 mg/l Test organisms (species): other:
NOEC (chronic)	0.052 mg/l Test organisms (species): Daphnia magna Duration: '16 d'
NOEC chronic fish	0.047 mg/l Test organisms (species): other: Duration: '30 d'
2-(2-butoxyethoxy)ethanol (112-34-5)	
LC50 - Fish [1]	1300 mg/l Test organisms (species): Lepomis macrochirus
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
2-phenoxyethanol (122-99-6)	
LC50 - Fish [1]	344 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 500 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
2-methylpentane-1,5-diamine (15520-10-2)	
LC50 - Fish [1]	1825 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	> 4.16 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	4.16 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
(93-83-4)	
LC50 - Fish [1]	5.1 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	3.2 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	18.6 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	23.4 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	0.32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.32 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '28 d'

12.2. Persistence and degradability

Propane-1,2-diol (57-55-6)	
Persistence and degradability	Product is biodegradable.
Biodegradation	81 % 28 days; 96% @ 64 days

12.3. Bioaccumulative potential

2,2'-iminodiethanol (111-42-2)	
Partition coefficient n-octanol/water (Log Pow)	-1.43 Source: ICSC

1,2-benzisothiazol-3(2H)-one (2634-33-5)	
Partition coefficient n-octanol/water (Log Pow)	0.64

Hydrotreated Heavy Naphthenic Distillate (64742-52-5)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6 Source: IUCLID

2,2 Nitrilotriethanol (102-71-6)	
Partition coefficient n-octanol/water (Log Pow)	-1.59

N-N-Bis(2-hydroxyethyl)oleamide (93-83-4)	
Partition coefficient n-octanol/water (Log Pow)	5.07 Source: Uakron

Propane-1,2-diol (57-55-6)	
Bioconcentration factor (BCF REACH)	≈ 0.09
Partition coefficient n-octanol/water (Log Pow)	-1.07

2-aminoethanol (141-43-5)	
Partition coefficient n-octanol/water (Log Kow)	-1.91

12.4. Mobility in soil

2,2'-iminodiethanol (111-42-2)	
Mobility in soil	1 – 10 Source: ECHA

Propane-1,2-diol (57-55-6)	
Surface tension	71.6 mN/m
Additional information	soluble in water

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

European List of Waste (LoW) code : 13 01 05* - non-chlorinated emulsions
15 01 10* - packaging containing residues of or contaminated by dangerous substances

HP Code : HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Inland waterway transport
Not applicable

Rail transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration

Abbreviations and acronyms:	
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

Full text of H- and EUH-statements:	
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Full text of use descriptors	
ERC2	Formulation into mixture
PC25	Metal working fluids
PROC5	Mixing or blending in batch processes
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
SU3	Industrial uses: Uses of substances as such or in preparations* at industrial sites

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.