

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

1.1. Product identifier

Product form	: Mixture
Product name	: Lubricool Cooling Agent
Product code	: E2789
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	: Professional use
Use of the substance/mixture	: Laboratory chemicals
Function or use category	: Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Elemental Microanalysis Ltd
1 Hameldown Road
Okehampton – Devon EX20 1UB
GB United Kingdom
T +44 1837 54446
enquiries@microanalysis.co.uk - <https://www.elementalmicroanalysis.com/>

1.4. Emergency telephone number

Emergency number : +44 (0) 7990 767375

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 1, Sub-Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

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

Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes severe skin burns and eye damage. 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 :

2-aminoethanol; ethanolamine

Hazard statements (CLP) :

H314 - Causes severe skin burns and eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P261 - Avoid breathing fume, spray, mist, vapours.
P280 - Wear eye protection, protective clothing, protective gloves.
P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Immediately call a POISON CENTER, a doctor.

P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER, a doctor.

P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER, a doctor.

P321 - Specific treatment (see supplemental first aid instruction on this label).

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ 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 substance(s) are 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]
2,2',2''-nitrilotriethanol substance with national workplace exposure limit(s) (AT, BE, CZ, DE, DK, EE, ES, FI, IE, LT, PT, SE, IS, NO, MK, CH)	CAS-No.: 102-71-6 EC-No.: 203-049-8	< 25	Acute Tox. 4 (Dermal), H312 (ATE=2000 mg/kg bodyweight)
2-aminoethanol; ethanolamine substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, IS, NO, MK, RS, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8	< 15	Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 4 (Oral), H302 (ATE=1089 mg/kg bodyweight) Skin Corr. 1B, H314
Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction [The high-boiling fraction separated by distillation from the products obtained from the reaction of nitric acid with cyclododecanol and cyclododecanone. Composed primarily of dodecanedioic acid, undecanedioic acid, and sebacic acid.]	CAS-No.: 72162-23-3 EC-No.: 276-431-5	< 10	Aquatic Chronic 3, H412
Sebacic acid substance with national workplace exposure limit(s) (LT, LV)	CAS-No.: 111-20-6 EC-No.: 203-845-5	< 10	Aquatic Chronic 3, H412

Specific concentration limits:

Name	Product identifier	Specific concentration limits
2-aminoethanol; ethanolamine	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8	(5 \leq C \leq 100) STOT SE 3, H335

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

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
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	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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.
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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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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. Do not breathe dust/fume/gas/mist/vapours/spray.
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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".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material.
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.

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. 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	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
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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

2-aminoethanol; ethanolamine (141-43-5)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	2-Aminoethanol
IOEL TWA	2.5 mg/m ³
IOEL TWA [ppm]	1 ppm
IOEL STEL	7.6 mg/m ³
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/m ³
WEL TWA (OEL TWA) [2]	1 ppm
WEL STEL (OEL STEL)	7.6 mg/m ³
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

8.1.2. Recommended monitoring procedures

No additional information available

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

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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	: red.
Appearance	: Liquid.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Water: ≈ 100 %
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Relative density	: Not available
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',2''-nitrilotriethanol (102-71-6)	
LD50 oral rat	6400 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	2000 mg/kg
2-aminoethanol; ethanolamine (141-43-5)	
LD50 oral rat	1089 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	2504 mg/kg Source: OECD SIDS
LC50 Inhalation - Rat (Vapours)	> 1487 mg/l Source: ECHA
Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction [The high-boiling fraction separated by distillation from the products obtained from the reaction of nitric acid with cyclododecanol and cyclododecanone. Composed primarily of dodecanedioic acid, undecanedioic acid, and sebacic acid.] (72162-23-3)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction [The high-boiling fraction separated by distillation from the products obtained from the reaction of nitric acid with cyclododecanol and cyclododecanone. Composed primarily of dodecanedioic acid, undecanedioic acid, and sebacic acid.] (72162-23-3)

LD50 dermal rat > 2000 mg/kg Source: HPVIS

LC50 Inhalation - Rat (Vapours) 4.3 mg/l Source: HPVIS

Sebacic acid (111-20-6)

LD50 oral rat > 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

LD50 dermal rat > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

LC50 Inhalation - Rat > 4500 mg/m³ Source: NLM, THOMSON

Skin corrosion/irritation : Causes severe skin burns.

2,2',2''-nitrilotriethanol (102-71-6)

pH 10.5

2-aminoethanol; ethanolamine (141-43-5)

pH 12.1 Temp.: 20 Concentration: 100 g/L

Serious eye damage/irritation : Causes serious eye damage.

2,2',2''-nitrilotriethanol (102-71-6)

pH 10.5

2-aminoethanol; ethanolamine (141-43-5)

pH 12.1 Temp.: 20 Concentration: 100 g/L

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

2,2',2''-nitrilotriethanol (102-71-6)

IARC group 3 - Not classifiable

2,2',2''-nitrilotriethanol (102-71-6)

NOAEL (chronic, oral, animal/male, 2 years) 63 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies)

Sebacic acid (111-20-6)

NOAEL (chronic, oral, animal/male, 2 years) > 3750 mg/kg bodyweight Animal: rat, Animal sex: male

NOAEL (chronic, oral, animal/female, 2 years) > 750 mg/kg bodyweight Animal: rat, Animal sex: female

Reproductive toxicity : Not classified

2,2',2''-nitrilotriethanol (102-71-6)

NOAEL (animal/male, F0/P) 1000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study), Guideline: other., Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)

NOAEL (animal/female, F0/P) 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study), Guideline: other., Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

2-aminoethanol; ethanolamine (141-43-5)	
NOAEL (animal/male, F0/P)	1000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study), Guideline: other., Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)
NOAEL (animal/female, F0/P)	300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study), Guideline: other., Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)

Sebacic acid (111-20-6)	
NOAEL (animal/male, F0/P)	> 3750 mg/kg bodyweight Animal: rat, Animal sex: male
NOAEL (animal/female, F0/P)	> 750 mg/kg bodyweight Animal: rat, Animal sex: female

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

2,2,2"-nitrilotriethanol (102-71-6)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

2-aminoethanol; ethanolamine (141-43-5)	
NOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: other., Guideline: other., Guideline: other:
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.01 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study), Guideline: EU Method B.8 (Subacute Inhalation Toxicity: 28-Day Study)

Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction [The high-boiling fraction separated by distillation from the products obtained from the reaction of nitric acid with cyclododecanol and cyclododecanone. Composed primarily of dodecanedioic acid, undecanedioic acid, and sebacic acid.] (72162-23-3)	
NOAEL (oral, rat, 90 days)	1800 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified

2-aminoethanol; ethanolamine (141-43-5)	
Viscosity, kinematic	23.392 mm ² /s

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified
Not rapidly degradable

2,2,2"-nitrilotriethanol (102-71-6)	
LC50 - Fish [1]	11800 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	609.88 mg/l Test organisms (species): Ceriodaphnia dubia
EC50 72h - Algae [1]	512 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

2,2',2''-nitrilotriethanol (102-71-6)	
EC50 72h - Algae [2]	216 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i>)
ErC50 algae	169 mg/l
NOEC chronic fish	> 1 mg/l Test organisms (species): other:
2-aminoethanol; ethanolamine (141-43-5)	
LC50 - Fish [1]	349 mg/l Test organisms (species): <i>Cyprinus carpio</i>
EC50 - Crustacea [1]	27.04 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	2.8 mg/l Test organisms (species): <i>Raphidocelis subcapitata</i> (previous names: <i>Pseudokirchneriella subcapitata</i> , <i>Selenastrum capricornutum</i>)
EC50 72h - Algae [2]	2.1 mg/l Test organisms (species): <i>Raphidocelis subcapitata</i> (previous names: <i>Pseudokirchneriella subcapitata</i> , <i>Selenastrum capricornutum</i>)
ErC50 algae	2.1 mg/l Source: ECHA
NOEC (chronic)	0.85 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC chronic fish	1.24 mg/l Test organisms (species): <i>Oryzias latipes</i> Duration: '41 d'
Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction [The high-boiling fraction separated by distillation from the products obtained from the reaction of nitric acid with cyclododecanol and cyclododecanone. Composed primarily of dodecanedioic acid, undecanedioic acid, and sebacic acid.] (72162-23-3)	
EC50 72h - Algae [1]	> 38.6 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i>)
EC50 96h - Algae [1]	105 mg/l Source: HPVIS
Sebacic acid (111-20-6)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): <i>Danio rerio</i> (previous name: <i>Brachydanio rerio</i>)
LC50 - Fish [2]	> 18 mg/l Test organisms (species): other:
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 96h - Algae [1]	681.937 mg/l Source: ECOSAR
12.2. Persistence and degradability	
No additional information available	
12.3. Bioaccumulative potential	
2,2',2''-nitrilotriethanol (102-71-6)	
Partition coefficient n-octanol/water (Log Pow)	-1.59
2-aminoethanol; ethanolamine (141-43-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.31 Source: ICSC
Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction [The high-boiling fraction separated by distillation from the products obtained from the reaction of nitric acid with cyclododecanol and cyclododecanone. Composed primarily of dodecanedioic acid, undecanedioic acid, and sebacic acid.] (72162-23-3)	
Partition coefficient n-octanol/water (Log Pow)	3.18 Source: HPVIS
Sebacic acid (111-20-6)	
Partition coefficient n-octanol/water (Log Pow)	2.2 Source: ICSC

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

12.4. Mobility in soil

Nitric acid, reaction products with cyclododecanol and cyclododecanone, by-products from, high-boiling fraction [The high-boiling fraction separated by distillation from the products obtained from the reaction of nitric acid with cyclododecanol and cyclododecanone. Composed primarily of dodecanedioic acid, undecanedioic acid, and sebacic acid.] (72162-23-3)

Mobility in soil 79 Source: ECHA Chem

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.
HP Code : HP8 - "Corrosive:" waste which on application can cause skin corrosion.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2491	UN 2491	UN 2491	UN 2491	UN 2491
14.2. UN proper shipping name				
ETHANOLAMINE SOLUTION	ETHANOLAMINE SOLUTION	Ethanolamine solution	ETHANOLAMINE SOLUTION	ETHANOLAMINE SOLUTION
Transport document description				
UN 2491 ETHANOLAMINE SOLUTION, 8, III, (E)	UN 2491 ETHANOLAMINE SOLUTION, 8, III	UN 2491 Ethanolamine solution, 8, III	UN 2491 ETHANOLAMINE SOLUTION, 8, III	UN 2491 ETHANOLAMINE SOLUTION, 8, III
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				


Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C7
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Hazard identification number (Kemler No.)	: 80
Orange plates	: 
Tunnel restriction code (ADR)	: E
EAC code	: 2X

Transport by sea

Special provisions (IMDG)	: 223
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG18, SG35
Properties and observations (IMDG)	: Colourless. Miscible with water. Corrosive to copper, copper compounds, copper alloys and rubber. Reacts violently with acids. Liquid and vapour cause burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C7
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: C7
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 80

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

No 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

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Abbreviations and acronyms:

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
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. 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 Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H312	Harmful in contact with skin.

Lubricool Cooling Agent

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Full text of H- and EUH-statements:

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The classification complies with : ATP 12

Safety Data Sheet (SDS)_EMAL, 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.