Safety Data Sheet according to (EC) No 1907/2006 as amended

SDS No. : 463489
V016.0

TEROSON VR 1520

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

1.1. Product identifier
TEROSON VR 1520

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Part B of 2-Component Epoxy Adhesive.

1.3. Details of the supplier of the safety data sheet
Henkel Ltd
Adhesives
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com
For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection or www.henkel-adhesives.com.

1.4. Emergency telephone number
24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Acute toxicity	Category 4
H302 Harmful if swallowed.	
Route of Exposure: Oral	
Skin corrosion	Sub-category 1B
H314 Causes severe skin burns and eye damage.	
Serious eye damage	Category 1
H318 Causes serious eye damage.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Specific target organ toxicity - repeated exposure	Category 2
H373 May cause damage to organs through prolonged or repeated exposure.	
Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:

Contains

4,4'-Methylenebis(cyclohexylamine)

Formaldehyde, polymer with benzenamine, hydrogenated
3-Aminopropyldimethylamine

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines

Amines, polyethylenepoly-, triethylenetetramine fraction

Signal word:

Danger

Hazard statement:

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement: Prevention

P260 Do not breathe dust/fume/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement: Response

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration >= 0,1% and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in concentration ≥ the concentration limit that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Poly(oxy-1,4-butanediyl), a-hydro-w-hydroxy-, polymer with ammonia 960525-56-8	20- 40 %	Acute Tox. 4, Oral, H302 Skin Corr. 1C, H314 Aquatic Chronic 3, H412 Eye Dam. 1, H318		
4,4'-Methylenebis(cyclohexylamine) 1761-71-3 217-168-8 01-2119541673-38	10- 20 %	Acute Tox. 4, Oral, H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 STOT RE 2, Oral, H373 Eye Dam. 1, H318		
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2 603-894-6 01-2119983522-33	10- 20 %	Acute Tox. 3, Oral, H301 Skin Corr. 1C, H314 STOT RE 2, H373 Aquatic Chronic 3, H412 Eye Dam. 1, H318 Skin Sens. 1, H317	dermal:ATE = > 2.000 mg/kg	
Polyoxypropylene diamine 9046-10-0 01-2119557899-12	10- 20 %	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412		
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1 257-861-2 01-2120781639-37	1- < 5 %	Eye Dam. 1, H318 Aquatic Chronic 3, H412 Skin Irrit. 2, H315		
3-Aminopropyldimethylamine 109-55-7 203-680-9 01-2119486842-27	1- < 5 %	Acute Tox. 4, Oral, H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 STOT SE 3, H335 Flam. Liq. 3, H226 Eye Dam. 1, H318 Acute Tox. 4, Dermal, H312	dermal:ATE = 1.100 mg/kg	
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	1- < 3 %	Eye Dam. 1, H318 Aquatic Chronic 2, H411 Skin Sens. 1B, H317 Skin Irrit. 2, H315		
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8 292-588-2 01-2119487919-13	0,1- < 1 %	Acute Tox. 4, Oral, H302 Acute Tox. 4, Dermal, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Chronic 3, H412		

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident.

Inhalation:
Fresh air. Delayed effects possible after inhalation. Inform emergency services.

Skin contact:
Rinse immediately with plenty of running water (for 10 minutes). Remove all contaminated clothing and apply bandage. Seek medical advice.

Eye contact:
Immediately flush eyes with soft jet of water or eye rinse solution for at least 15 minutes. Hold eyelid wide-open. Seek a doctor/hospital, eye flushing should continue during transportation to a doctor.

Ingestion:
Rinse the mouth. Drink plenty of water. Immediate medical advice necessary.
Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed
INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

SKIN: Rash, Urticaria.

EYE: Irritation, conjunctivitis.

Causes burns.

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
In case of fire toxic gases can be released.

5.3. Advice for firefighters
Wear self-contained breathing apparatus.
Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment.
Avoid contact with skin and eyes.
Keep unprotected persons away.

6.2. Environmental precautions
Do not empty into drains / surface water / ground water.
Inform authorities in the event of product spillage to water courses or sewage systems.

6.3. Methods and material for containment and cleaning up
Remove mechanically.
Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures:
Wash hands before work breaks and after finishing work.
Wash contaminated clothing before reuse.
Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities
Ensure good ventilation/extraction.
Storage at 15 to 35°C is recommended.
Store in a cool, dry place.

7.3. Specific end use(s)
Part B of 2-Component Epoxy Adhesive.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS, RESPIRABLE DUST]		2,4	Time Weighted Average (TWA):		EH40 WEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS, INHALABLE DUST]		6	Time Weighted Average (TWA):		EH40 WEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [Dust, inhalable dust]		10	Time Weighted Average (TWA):		EH40 WEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [Dust, respirable dust]		4	Time Weighted Average (TWA):		EH40 WEL
Talc (Mg3H2(SiO3)4) 14807-96-6 [TALC, RESPIRABLE DUST]		1	Time Weighted Average (TWA):		EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [DUSTS NON-SPECIFIC]		10	Time Weighted Average (TWA):		IR_OEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS]		2,4	Time Weighted Average (TWA):		IR_OEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS]		6	Time Weighted Average (TWA):		IR_OEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [DUSTS NON-SPECIFIC]		4	Time Weighted Average (TWA):		IR_OEL
Talc (Mg3H2(SiO3)4) 14807-96-6 [TALC]		10	Time Weighted Average (TWA):		IR_OEL
Talc (Mg3H2(SiO3)4) 14807-96-6 [TALC]		0,8	Time Weighted Average (TWA):		IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	aqua (intermittent releases)		0,08 mg/l				
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	sediment (freshwater)				14,6 mg/kg		
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	aqua (marine water)		0,008 mg/l				
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	sediment (marine water)				1,46 mg/kg		
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	sewage treatment plant (STP)		3,2 mg/l				
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	Soil				4,56 mg/kg		
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	aqua (freshwater)		0,08 mg/l				
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	oral				0,556 mg/kg		
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	aqua (freshwater)		0,015 mg/l				
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	aqua (marine water)		0,002 mg/l				
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	aqua (intermittent releases)		0,15 mg/l				
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	sewage treatment plant (STP)		1,9 mg/l				
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	sediment (freshwater)				15 mg/kg		
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	sediment (marine water)				1,5 mg/kg		
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Soil				1,8 mg/kg		
Polypropylene glycol diamine (MW=230) 9046-10-0	aqua (freshwater)		0,015 mg/l				
Polypropylene glycol diamine (MW=230) 9046-10-0	aqua (marine water)		0,014 mg/l				
Polypropylene glycol diamine (MW=230) 9046-10-0	aqua (intermittent releases)		0,15 mg/l				
Polypropylene glycol diamine (MW=230) 9046-10-0	sewage treatment plant (STP)		7,5 mg/l				
Polypropylene glycol diamine (MW=230) 9046-10-0	sediment (freshwater)				0,132 mg/kg		
Polypropylene glycol diamine (MW=230) 9046-10-0	sediment (marine water)				0,125 mg/kg		
Polypropylene glycol diamine (MW=230) 9046-10-0	oral				6,93 mg/kg		
Polypropylene glycol diamine (MW=230) 9046-10-0	Soil				0,0176 mg/kg		
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	aqua (freshwater)		0,093 mg/l				
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	aqua (marine water)		0,0093 mg/l				
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	aqua (intermittent releases)		0,93 mg/l				
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	sewage treatment plant (STP)		1,8 mg/l				
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	sediment (freshwater)				0,372 mg/kg		

1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	sediment (marine water)				0,0372 mg/kg		
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	Air						no hazard identified
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	Predator						no potential for bioaccumulation
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	Soil				0,0198 mg/kg		
3-Aminopropyldimethylamine 109-55-7	aqua (freshwater)		0,073 mg/l				
3-Aminopropyldimethylamine 109-55-7	aqua (intermittent releases)		0,34 mg/l				
3-Aminopropyldimethylamine 109-55-7	aqua (marine water)		0,007 mg/l				
3-Aminopropyldimethylamine 109-55-7	sewage treatment plant (STP)		10 mg/l				
3-Aminopropyldimethylamine 109-55-7	sediment (freshwater)				0,735 mg/kg		
3-Aminopropyldimethylamine 109-55-7	sediment (marine water)				0,073 mg/kg		
3-Aminopropyldimethylamine 109-55-7	Soil				0,104 mg/kg		
3-Aminopropyldimethylamine 109-55-7	Predator						no potential for bioaccumulation
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	aqua (intermittent releases)		0,2 mg/l				
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	aqua (freshwater)		0,027 mg/l				
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	aqua (marine water)		0,003 mg/l				
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	sediment (freshwater)				8,572 mg/kg		
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	sediment (marine water)				0,857 mg/kg		
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Soil				1,25 mg/kg		
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	sewage treatment plant (STP)		0,13 mg/l				
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	oral						no potential for bioaccumulation

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	Workers	inhalation	Long term exposure - systemic effects		0,9 mg/m3	
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	Workers	dermal	Long term exposure - systemic effects		0,25 mg/kg	
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Workers	inhalation	Long term exposure - systemic effects		0,2 mg/m3	
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Workers	inhalation	Acute/short term exposure - systemic effects		2 mg/m3	
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Workers	dermal	Long term exposure - systemic effects		2 mg/kg	
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Workers	dermal	Acute/short term exposure - systemic effects		6 mg/kg	
Polypropylene glycol diamine (MW=230) 9046-10-0	Workers	dermal	Long term exposure - systemic effects		2,5 mg/kg	
Polypropylene glycol diamine (MW=230) 9046-10-0	Workers	inhalation	Long term exposure - systemic effects		10,58 mg/m3	
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	Workers	inhalation	Long term exposure - systemic effects		5,8 mg/m3	no hazard identified
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	Workers	dermal	Long term exposure - systemic effects		2,33 mg/kg	no hazard identified
1,3-Bis[3-(dimethylamino)propyl]urea 52338-87-1	General population	oral	Long term exposure - systemic effects		0,833 mg/kg	no hazard identified
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Workers	Inhalation	Long term exposure - systemic effects		0,54 mg/m3	no potential for bioaccumulation
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	General population	Inhalation	Long term exposure - systemic effects		0,096 mg/m3	no potential for bioaccumulation
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	General population	oral	Long term exposure - systemic effects		0,14 mg/kg	no potential for bioaccumulation

Biological Exposure Indices:
None

8.2. Exposure controls:

Engineering controls:
Ensure good ventilation/extraction.

Respiratory protection:
Ensure good ventilation/suction at the workplace.

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Goggles which can be tightly sealed.
Protective eye equipment should conform to EN166.

Skin protection:
Wear protective equipment.
Protective clothing that covers arms and legs.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
Use only personal protection that's CE-labelled according to Directive 89/686/EEC (Europe) or to Regulation No. 819 of 19 August 1994 (Norway), or equivalent.
The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.
Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Delivery form	paste
Colour	grey
Odor	of amine
Melting point	Not applicable, Product is a liquid
Solidification temperature	< 5 °C (< 41 °F)
Initial boiling point	Not applicable, Decomposes before boiling point is reached
Flammability	non flammable
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 93 °C (> 199.4 °F)
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH (20 °C (68 °F); Conc.: 10 % product; Solvent: Water)	10 - 11
Viscosity (kinematic) (40 °C (104 °F);)	> 20,5 mm2/s
Viscosity, dynamic ()	1.000 - 3.000 mPa.s no method
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Not miscible or difficult to mix
Partition coefficient: n-octanol/water	Not applicable Mixture
Vapour pressure (20 °C (68 °F))	< 1 hPa
Density (20 °C (68 °F))	1,0 g/cm3
Relative vapour density: (20 °C)	> 1

Particle characteristics	Not applicable Product is a liquid

9.2. Other information
Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity
None if used for intended purpose.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
None if used for intended purpose.

10.5. Incompatible materials
None if used properly.

10.6. Hazardous decomposition products
No decomposition if used according to specifications.

SECTION 11: Toxicological information

General toxicological information:
Persons suffering from allergic reactions to amines should avoid contact with the product.

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

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Poly(oxy-1,4-butanediyl), a-hydro-w-hydroxy-, polymer with ammonia 960525-56-8	LD50	2.000 mg/kg	rat	not specified
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	LD50	380 mg/kg	rat	EPA OPP 81-1 (Acute Oral Toxicity)
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	LD50	300 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Polyoxypropylene diamine 9046-10-0	LD50	2.885,3 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	LD50	5.126 mg/kg	rat	other guideline:
3-Aminopropyldimethylamine 109-55-7	LD50	410 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	LD50	> 2.000 mg/kg	rat	not specified
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	LD50	1.716 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Poly(oxy-1,4-butanediyl), a-hydro-w-hydroxy-, polymer with ammonia 960525-56-8	LD50	> 2.000 mg/kg	guinea pig	not specified
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	LD50	2.110 mg/kg	rabbit	not specified
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Acute toxicity estimate (ATE)	> 2.000 mg/kg	rabbit	Expert judgement
Polyoxypropylene diamine 9046-10-0	LD50	2.979,7 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	LD50	> 2.050 mg/kg	rat	other guideline:
3-Aminopropyldimethylamine 109-55-7	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	LD50	> 2.000 mg/kg	rat	not specified
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	LD50	1.465 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	corrosive	2,75 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Category 1C (corrosive)		Corrositex Biobarrier Membrane (reconstituted collagen matrix)	OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin Corrosion)
Polyoxypropylene diamine 9046-10-0	corrosive	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	irritating or corrosive		Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	not corrosive		Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
3-Aminopropyldimethylamine 109-55-7	Category 1B (corrosive)		rabbit	BASF Test
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	irritating		Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	corrosive		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	Category 1 (irreversible effects on the eye)		rabbit	not specified
Polyoxypropylene diamine 9046-10-0	corrosive		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
3-Aminopropyldimethylamine 109-55-7	corrosive		rabbit	BASF Test
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Category 1 (irreversible effects on the eye)		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	sensitising	Buehler test	guinea pig	Buehler test
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
3-Aminopropyldimethylamine 109-55-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
3-Aminopropyldimethylamine 109-55-7	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Sensitizing	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Polyoxypropylene diamine 9046-10-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Polyoxypropylene diamine 9046-10-0	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
3-Aminopropyldimethylamine 109-55-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
3-Aminopropyldimethylamine 109-55-7	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
3-Aminopropyldimethylamine 109-55-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Polyoxypropylene diamine 9046-10-0	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	negative			mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
3-Aminopropyldimethylamine 109-55-7	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	negative	intraperitoneal		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	not carcinogenic	dermal	lifetime three times/w	mouse	male	equivalent or similar OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	NOAEL P 500 mg/kg NOAEL F1 500 mg/kg	screening	oral: gavage	rat	not specified
3-Aminopropyldimethylamine 109-55-7	NOAEL P 200 mg/kg NOAEL F1 200 mg/kg	screening	oral: gavage	rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	NOAEL 15 mg/kg	oral: gavage	M: 36 d / F: 48-52 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	NOAEL 15 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Polyoxypropylene diamine 9046-10-0	NOAEL 239 mg/kg	oral: feed	31 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Polyoxypropylene diamine 9046-10-0	NOAEL 250 mg/kg	dermal	90 d Once daily, five days per week	rat	equivalent or similar to OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	NOAEL > 500 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
3-Aminopropyldimethylamine 109-55-7	NOAEL 50 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
3-Aminopropyldimethylamine 109-55-7	NOAEL 250 mg/kg	oral: gavage	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	LOAEL 50 mg/kg	oral: gavage	26 w daily	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:
Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Poly(oxy-1,4-butanediyl), a-hydro-w-hydroxy-, polymer with ammonia 960525-56-8	LC50	> 100 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	LC50	> 100 mg/l	96 h	Leuciscus idus	DIN 38412-15
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	LC50	96 mg/l	96 h	Poecilia reticulata	OECD Guideline 203 (Fish, Acute Toxicity Test)
Polyoxypropylene diamine 9046-10-0	LC50	772,14 mg/l	96 h	Cyprinodon variegatus	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	LC50	> 1.000 mg/l	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
3-Aminopropyldimethylamine 109-55-7	LC50	122 mg/l	96 h	Leuciscus idus melanotus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	LC50	7,07 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	LC50	330 mg/l	96 h	Pimephales promelas	other guideline:

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Poly(oxy-1,4-butanediyl), a-hydro-w-hydroxy-, polymer with ammonia 960525-56-8	EC50	15 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	EC50	7,07 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	EC50	15,4 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Polyoxypropylene diamine 9046-10-0	EC50	80 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	EC50	93 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
3-Aminopropyldimethylamine 109-55-7	EC50	59,5 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	EC50	5,18 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	EC50	31 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	NOEC	4 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
3-Aminopropyldimethylamine 109-55-7	NOEC	3,64 mg/l	22 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	EC10	1,9 mg/l	21 day	Daphnia magna	OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Poly(oxy-1,4-butanediyl), a-hydro-w-hydroxy-, polymer with ammonia 960525-56-8	IC50	135 mg/l	72 h		OECD Guideline 201 (Alga, Growth Inhibition Test)
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	EC50	> 140 - 200 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	EC10	100 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	EC10	1,2 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	EC50	43,94 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
Polyoxypropylene diamine 9046-10-0	EC10	1,4 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Polyoxypropylene diamine 9046-10-0	EC50	15 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	EC50	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	EC10	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
3-Aminopropyldimethylamine 109-55-7	EC50	56,2 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
3-Aminopropyldimethylamine 109-55-7	NOEC	19,53 mg/l	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	EC50	4,11 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	NOEC	1,25 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	EC50	20 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	EC10	1,34 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	EC20	> 1.000 mg/l	3 h	activated sludge, industrial	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Polyoxypropylene diamine 9046-10-0	EC50	750 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	EC50	820 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
3-Aminopropyldimethylamine 109-55-7	EC10	17 mg/l	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	EC50	314 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

68410-23-1					

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Poly(oxy-1,4-butanediyl), a-hydro-w-hydroxy-, polymer with ammonia 960525-56-8	not readily biodegradable.	aerobic	31 %	28 day	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Polyoxypropylene diamine 9046-10-0	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	not readily biodegradable.	aerobic	1 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
3-Aminopropyldimethylamine 109-55-7	inherently biodegradable	not specified	100 %	15 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
3-Aminopropyldimethylamine 109-55-7	readily biodegradable	aerobic	65 %	20 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	not readily biodegradable.	aerobic	> 0 - < 70 %	74 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	not readily biodegradable.	aerobic	0 %	162 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	not inherently biodegradable	aerobic	20 %	84 d	OECD Guideline 302 A (Inherent Biodegradability: Modified SCAS Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	< 60	60 d	24 °C	Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	18 - 219	56 d		Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	< 2,3	28 d	25 °C	Cyprinus carpio	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	2,2	23 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	2,68	21 °C	EU Method A.8 (Partition Coefficient)
Polyoxypropylene diamine 9046-10-0	1,34	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	0,817	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
3-Aminopropyldimethylamine 109-55-7	-0,352	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	8,71		QSAR (Quantitative Structure Activity Relationship)
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	-2,65		OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
4,4'-Methylenebis(cyclohexylamine) 1761-71-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Polyoxypropylene diamine 9046-10-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
3-Aminopropyldimethylamine 109-55-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 68410-23-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Amines, polyethylenepoly-, triethylenetetramine fraction 90640-67-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.
080409

SECTION 14: Transport information

14.1. UN number or ID number

ADR	3259
RID	3259
ADN	3259
IMDG	3259
IATA	3259

14.2. UN proper shipping name

ADR	AMINES, SOLID, CORROSIVE, N.O.S. (Polyether amine,4,4-methylenebis-cyclohexylamine,Polyoxy propylene diamine)
RID	AMINES, SOLID, CORROSIVE, N.O.S. (Polyether amine,4,4-methylenebis-cyclohexylamine,Polyoxy propylene diamine)
ADN	AMINES, SOLID, CORROSIVE, N.O.S. (Polyether amine,4,4-methylenebis-cyclohexylamine,Polyoxy propylene diamine)
IMDG	AMINES, SOLID, CORROSIVE, N.O.S. (Polyether amine,4,4-methylenebis-cyclohexylamine,Polyoxy propylene diamine)
IATA	Amines, solid, corrosive, n.o.s. (Polyether amine,4,4-methylenebis-cyclohexylamine,Polyoxy propylene diamine)

14.3. Transport hazard class(es)

ADR	8
RID	8
ADN	8
IMDG	8
IATA	8

14.4. Packing group

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

14.5. Environmental hazards

ADR	Environmentally Hazardous
RID	Environmentally Hazardous
ADN	Environmentally Hazardous
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EU)	0 %

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
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.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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