SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

EPC-140 B

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

1.1. Product identifier

Product name : EPC-140 B
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Adhesive

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
🖷 +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
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info@novatech.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Skin Corr.	category 1B	H314: Causes severe skin burns and eye damage.
Eye Dam.	category 1	H318: Causes serious eye damage.
Aquatic Acute	category 1	H400: Very toxic to aquatic life.
Aquatic Chronic	category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Signal word Danger

H-statements

H317 May cause an allergic skin reaction.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

P-statements

P280 Wear protective gloves, protective clothing and eye protection/face protection.
P260 Do not breathe dust.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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/doctor.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
calcium carbonate	471-34-1 207-439-9	25% <C<50%		(2)	Constituent	
9,12-octadecadienoic acid (9Z,12Z)-, dimer, polymer with 3,3-(oxybis(2,1-ethanediyloxy))bis(1-propanamine)	68541-13-9	25% <C<50%	Eye Irrit. 2; H319	(1)	Constituent	
fatty acids C18 unsaturated, reaction products with tetraethylenepentamine	1226892-45-0	10% <C<25%	Skin Sens. 1A; H317 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	(1)	Constituent	M: 10 (Acute, ECHA (registration dossier)) M: 1 (Chronic, ECHA (registration dossier))
3,3'-oxybis(ethyleneoxy)bis(propylamine)	4246-51-9 224-207-2	1%<C<10%	Skin Sens. 1; H317 Skin Corr. 1B; H314 Eye Dam. 1; H318	(1)(10)	Constituent	
tetraethylenepentamine	112-57-2 203-986-2	1%<C<10%	Skin Sens. 1; H317 Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 2; H411	(1)(10)	Constituent	

(1) For H- and EUH-statements in full: see section 16
(2) Substance with a Community workplace exposure limit
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:
Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

After inhalation:
Remove victim into fresh air. Immediately consult a doctor/medical service.

After skin contact:
If possible, wipe up/dry remove chemical. Then rinse/shower immediately for 30 minutes with (lukewarm) water. Cut clothing; never remove burnt clothing from the wound. Do not give any pain medication. Consult a doctor/medical service.

After eye contact:
Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a doctor/medical service.

After ingestion:
Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

4.2.1 Acute symptoms

After inhalation:
EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract.

After skin contact:
Caustic burns/corrosion of the skin.

After eye contact:
Corrosion of the eye tissue.

After ingestion:
Burns to the gastric/intestinal mucosa. Possible esophageal perforation.

4.2.2 Delayed symptoms
No effects known.

4.3. Indication of any immediate medical attention and special treatment needed
If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media
5.1.1 Suitable extinguishing media:
Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.
Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:
Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.
Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture
On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters
5.3.1 Instructions:
Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:
Gloves (EN 374). Safety glasses (EN 166). Corrosion-proof suit (EN 14605). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
No naked flames.

6.1.1 Protective equipment for non-emergency personnel
See section 8.2

6.1.2 Protective equipment for emergency responders
Gloves (EN 374). Safety glasses (EN 166). Corrosion-proof suit (EN 14605).

Suitable protective clothing
See section 8.2

6.2. Environmental precautions
Contain released product. Dam up the solid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up
Solid spill: cover with absorbent material. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections
See section 13.

SECTION 7: Handling and storage
The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling
Keep away from naked flames/heat. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities
7.2.1 Safe storage requirements:
Meet the legal requirements.

7.2.2 Keep away from:
Heat sources.

7.2.3 Suitable packaging material:
No data available

7.2.4 Non suitable packaging material:
No data available

7.3. Specific end use(s)
If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

Belgium

Calcium (carbonate de)	Time-weighted average exposure limit 8 h	10 mg/m³

France

Calcium (carbonate de)	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m³

UK

Calcium carbonate inhalable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m³
Calcium carbonate respirable dust	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m³

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

Product name	Test	Number
Calciumdicarbonate	NIOSH	7020

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

calcium carbonate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	6.36 mg/m³	

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	9.87 mg/m³	
	Long-term systemic effects dermal	1.4 mg/kg bw/day	

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	59 mg/m³	
	Acute systemic effects inhalation	176 mg/m³	
	Long-term local effects inhalation	1 mg/m³	
	Acute local effects inhalation	13 mg/m³	
	Long-term systemic effects dermal	8.3 mg/kg bw/day	

DNEL/DMEL - General population

calcium carbonate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	1.06 mg/m³	
	Long-term systemic effects oral	6.1 mg/kg bw/day	
	Acute systemic effects oral	6.1 mg/kg bw/day	

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1.74 mg/m³	
	Long-term systemic effects dermal	0.5 mg/kg bw/day	
	Long-term systemic effects oral	0.5 mg/kg bw/day	

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	17 mg/m³	
	Acute systemic effects inhalation	52 mg/m³	
	Long-term local effects inhalation	0.5 mg/m³	
	Acute local effects inhalation	6.5 mg/m³	
	Long-term systemic effects dermal	5 mg/kg bw/day	
	Long-term systemic effects oral	5 mg/kg bw/day	

PNEC

calcium carbonate

Compartments	Value	Remark
STP	100 mg/l	

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Compartments	Value	Remark
Fresh water	30.7 µg/l	
Marine water	3.07 µg/l	
Fresh water (intermittent releases)	6.12 µg/l	
STP	2.3 mg/l	
Fresh water sediment	119.8 mg/kg sediment dw	
Marine water sediment	11.98 mg/kg sediment dw	
Soil	9.44 mg/kg soil dw	
Oral	20 mg/kg food	

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Compartments	Value	Remark
Fresh water	0.22 mg/l	
Marine water	0.022 mg/l	
Fresh water (intermittent releases)	2.2 mg/l	
STP	500 mg/l	
Fresh water sediment	1.1 mg/kg sediment dw	
Marine water sediment	0.11 mg/kg sediment dw	
Soil	0.091 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions. Dust production: dust mask with filter type P3.

b) Hand protection:

Protective gloves against chemicals (EN 374).

c) Eye protection:

Safety glasses (EN 166).

d) Skin protection:

Corrosion-proof clothing (EN 14605).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Paste
Odour	Characteristic odour
Odour threshold	No data available in the literature
Colour	Beige
Particle size	Not applicable
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available in the literature
Kinematic viscosity	No data available in the literature
Melting point	No data available in the literature
Boiling point	> 300 °C
Relative vapour density	Not applicable
Vapour pressure	No data available in the literature
Solubility	Water ; insoluble
Relative density	1.19 ; 20 °C
Absolute density	1190 kg/m³ ; 20 °C
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	> 93 °C
pH	Not applicable (non-soluble in water)

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire hazard.

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

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

11.1.1 Test results

Acute toxicity

EPC-140 B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

calcium carbonate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 420	> 2000 mg/kg		Rat (female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation (aerosol)	LC50	OECD 403	> 3 mg/l air	4 h	Rat (male / female)	Experimental value	

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 423	> 2000 mg/kg bw		Rat (female)	Experimental value	
Dermal						Data waiving	
Inhalation						Data waiving	

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	3160 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 2150 mg/kg	24 h	Rat (male / female)	Experimental value	
Inhalation						Data waiving	

tetraethylenepentamine

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral			category 4			Annex VI	
Dermal			category 4			Annex VI	
Inhalation	LC50		> 9.9 mg/l air	8 h	Rat (male)	Literature study	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

EPC-140 B

No (test)data on the mixture available

Classification is based on the relevant ingredients

calcium carbonate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	Single treatment
Skin	Not irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Not applicable (in vitro test)	Not irritating	OECD 439	15 minutes		Reconstructed human epidermis	Experimental value	

9,12-octadecadienoic acid (9Z,12Z)-, dimer, polymer with 3,3-(oxybis(2,1-ethanediyloxy))bis(1-propanamine)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating; category 2					Literature study	

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye						Data waiving	
Eye	Serious eye damage; category 1					Literature study	
Skin	Corrosive	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage; category 1					Data waiving	
Skin	Corrosive	BASF test	1 h	24; 48; 72 hours	Rabbit	Experimental value	

Data waiving for eye corrosion based on corrosive properties

tetraethylenepentamine

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	Other			Rabbit	Experimental value	
Skin	Corrosive	Other	4 h		Rabbit	Experimental value	

Conclusion

Causes severe skin burns and eye damage.

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

EPC-140 B

No (test)data on the mixture available

Classification is based on the relevant ingredients

calcium carbonate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse (female)	Experimental value	

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406			Guinea pig (male / female)	Experimental value	
Inhalation						Data waiving	

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing					QSAR	

tetraethylenepentamine

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing				Guinea pig	Experimental value	

Conclusion

May cause an allergic skin reaction.

Not classified as sensitizing for inhalation

Specific target organ toxicity

EPC-140 B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

calcium carbonate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 422	1000 mg/kg bw/day		No effect	48 day(s)	Rat (male / female)	Experimental value
Inhalation (dust)	NOAEC local effects	OECD 413	≥ 0.212 mg/m³ air		No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (dust)	NOEC	OECD 413	0.399 mg/l		No adverse systemic effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 422	≥ 300 mg/kg bw/day		No effect	28 day(s) - 48 day(s)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL systemic effects	OECD 422	600 mg/kg bw/day		No effect	59 day(s) - 62 day(s)	Rat (male / female)	Experimental value
Oral (stomach tube)	NOAEL local effects	OECD 422	100 mg/kg bw/day		Histopathology	62 day(s)	Rat (female)	Experimental value
Oral (stomach tube)	NOAEL local effects	OECD 422	< 100 mg/kg bw/day		Histopathology	59 day(s)	Rat (male)	Experimental value

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

EPC-140 B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

calcium carbonate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 473	Human lymphocytes	No effect	Experimental value	

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 473	Human lymphocytes	No effect	Experimental value	

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value	

Mutagenicity (in vivo)

EPC-140 B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetraethylenepentamine

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative			Mouse (male / female)		Literature study

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

EPC-140 B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

calcium carbonate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Unknown								Data waiving

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

EPC-140 B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

calcium carbonate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (diet))	NOAEC	Equivalent to OECD 414	1963 mg/kg bw/day - 2188 mg/kg bw/day	62 day(s)	Rat	No effect	Foetus	Experimental value
Maternal toxicity (Oral (diet))	NOAEC	Equivalent to OECD 414	1963 mg/kg bw/day - 2188 mg/kg bw/day	62 day(s)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOEL	OECD 422	1000 mg/kg bw/day	48 day(s)	Rat (male / female)	No effect		Experimental value

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	≥ 150 mg/kg bw/day	14 days (gestation, daily)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	50 mg/kg bw/day - 150 mg/kg bw/day	14 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	OECD 422	≥ 300 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

3,3'-oxybis(ethyleneoxy)bis(propylamine)

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL (P)	OECD 422	600 mg/kg bw/day		Rat	No effect		Experimental value
Effects on fertility	NOAEL (P)	OECD 422	600 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

EPC-140 B

No (test)data on the mixture available

Chronic effects from short and long-term exposure

Skin rash/inflammation.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

EPC-140 B

No (test)data on the mixture available

Classification is based on the relevant ingredients

calcium carbonate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 100 %	96 h	Oncorhynchus mykiss	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	> 100 %	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	OECD 201	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Nominal concentration
	NOEC	OECD 201	50 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	Dose level		60 mg/l	42 day(s)	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; Calcium ion
Long-term toxicity aquatic crustacea								Data waiving
Toxicity aquatic micro-organisms	EC50	OECD 209	> 1000 mg/l	3 h	Activated sludge			Literature study

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	0.19 mg/l	96 h	Danio rerio	Semi-static system	Fresh water	Read-across; GLP
Acute toxicity crustacea	EC50	OECD 202	0.18 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across; GLP
Toxicity algae and other aquatic plants	ErC50	OECD 201	0.638 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Nominal concentration
	EC10	OECD 201	0.395 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Acute toxicity other aquatic organisms	EC50	OECD 202	0.18 mg/l	48 h		Static system	Fresh water	Experimental value
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	OECD 211	320 µg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; Nominal concentration

Classification of this substance is debatable as it does not correspond to the conclusion from the test

M-factor of this substance is debatable as it does not correspond to the conclusion from the test

3,3'-oxybis(ethyleneoxy)bis(propylamine)

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	DIN 38412-15	215 mg/l - 464 mg/l	96 h	Leuciscus idus	Static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	EU Method C.2	218.16 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EC50	DIN 38412-9	> 500 mg/l	72 h	Scenedesmus subspicatus	Static system	Fresh water	Experimental value; Nominal concentration
	EC10	DIN 38412-9	5.4 mg/l	72 h	Scenedesmus subspicatus	Static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity fish	NOEC		> 1 mg/l		Leuciscus idus		Fresh water	Calculated value
Long-term toxicity aquatic crustacea	NOEC		> 1 mg/l		Daphnia magna		Fresh water	Calculated value

tetraethylenepentamine

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EU Method C.1	420 mg/l	96 h	Poecilia reticulata	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	EU Method C.2	24.1 mg/l	48 h	Daphnia magna	Static system		Experimental value; GLP
Toxicity algae and other aquatic plants	NOEC	OECD 201	0.5 mg/l	72 h	Selenastrum capricornutum			Experimental value; Growth rate
	ErC50	OECD 201	6.8 mg/l	72 h	Selenastrum capricornutum			Experimental value
Toxicity aquatic micro-organisms	EC50	OECD 209	1600 mg/l	1 h	Activated sludge			Experimental value; GLP
	EC10		186 mg/l	17 h	Pseudomonas putida			Experimental value; GLP

Conclusion

Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

Biodegradation water

Method	Value	Duration	Value determination
OECD 301D	24 %; Oxygen consumption	28 day(s)	Read-across

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B	0 %	28 day(s)	Experimental value

tetraethylenepentamine

Biodegradation water

Method	Value	Duration	Value determination
OECD 301A	< 10 %; GLP	28 day(s)	Experimental value

Conclusion

Water

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

EPC-140 B

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

calcium carbonate

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not quantifiable			

9,12-octadecadienoic acid (9Z,12Z)-, dimer, polymer with 3,3-(oxybis(2,1-ethanediyloxy))bis(1-propanamine)

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
					Data waiving

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 123		2.2	25.2 °C	Read-across

3,3'-oxybis(ethyleneoxy)bis(propylamine)

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.01	0.89 - 3.16		Pisces	Estimated value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		-1.25	25 °C	Experimental value

tetraethylenepentamine

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFBAF v3.01	3.162 l/kg; Fresh weight			Estimated value

Log Kow

Method	Remark	Value	Temperature	Value determination
KOWWIN		-3.16		Estimated value

Conclusion

No straightforward conclusion can be drawn based upon the available numerical values

12.4. Mobility in soil

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

(log) Koc

Parameter	Method	Value	Value determination
Koc		944980	Literature study
log Koc		5.98	Calculated value

3,3'-oxybis(ethyleneoxy)bis(propylamine)

(log) Koc

Parameter	Method	Value	Value determination
Koc	SRC PCKOCWIN v2.0	0.83	Estimated value

tetraethylenepentamine

(log) Koc

Parameter	Method	Value	Value determination
log Koc		3.04	Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Fugacity Model Level III	7.45E-16 %		0.155 %	81.8 %	18 %	Calculated value

Conclusion

Contains component(s) with potential for mobility in the soil
Contains component(s) that adsorb(s) into the soil

12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

EPC-140 B

Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

Groundwater

Groundwater pollutant

calcium carbonate

Water ecotoxicity pH

pH shift

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Water ecotoxicity pH

pH shift

tetraethylenepentamine

Water ecotoxicity pH

pH shift

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
08 04 09* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1760

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	80
Class	8
Classification code	C9

14.4. Packing group

Packing group	II
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number

UN number	1760

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	80
Class	8
Classification code	C9

14.4. Packing group

Packing group	II
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number

UN number	1760

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	8
Classification code	C9

14.4. Packing group

Packing group	II
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number

UN number	1760

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	8

14.4. Packing group

Packing group	II
Labels	8

14.5. Environmental hazards

Marine pollutant	P
Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	274
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

14.7. Maritime transport in bulk according to IMO instruments

Annex II of MARPOL 73/78	Not applicable, based on available data

Air (ICAO-TI/IATA-DGR)

14.1. UN number

UN number	1760

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	8

14.4. Packing group

Packing group	II
Labels	8

14.5. Environmental hazards

Environmentally hazardous substance mark	yes

14.6. Special precautions for user

Special provisions	A3
Special provisions	A803

Passenger and cargo transport

Limited quantities: maximum net quantity per packaging	0.5 L

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
0 %	

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· 3,3'-oxybis(ethyleneoxy)bis(propylamine) · tetraethylenepentamine	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage”; b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life threatening lung damage”; c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
· tetraethylenepentamine	Substances falling within one or more of the	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU)

	following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.	2020/2081

National legislation Belgium

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No data available

National legislation The Netherlands

EPC-140 B

Waterbezwaarlijkheid	A (1); Algemene Beoordelingsmethodiek (ABM)

National legislation France

EPC-140 B

No data available

National legislation Germany

EPC-140 B

Lagerklasse (TRGS510)	8 A: Brennbare ätzende Gefahrstoffe
WGK	2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017

calcium carbonate

TA-Luft	5.2.1

9,12-octadecadienoic acid (9Z,12Z)-, dimer, polymer with 3,3-(oxybis(2,1-ethanediyloxy))bis(1-propanamine)

TA-Luft	5.2.1

fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

TA-Luft	5.2.5/I

3,3'-oxybis(ethyleneoxy)bis(propylamine)

TA-Luft	5.2.5/I

tetraethylenepentamine

TA-Luft	5.2.5/I

National legislation Austria

EPC-140 B

No data available

National legislation United Kingdom

EPC-140 B

No data available

Other relevant data

EPC-140 B

No data available

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.