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

1.1 Product identifier

Trade name : ARALDITE® 2018 POLYOL

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

Use of the Substance/Mixture : Adhesives and/or sealants

1.3 Details of the supplier of the safety data sheet

Company : Huntsman Advanced Materials (Europe)BVBA
Address : Everslaan 45
3078 Everberg
Belgium
Telephone : +41 61 299 20 41
Telefax : +41 61 299 20 40

E-mail address of person responsible for the SDS : Global_Product_EHS_AdMat@huntsman.com

1.4 Emergency telephone number

Emergency telephone number : Berlin: 0049 30 19 24 0 & 0049 30 30 68 6 7 11
Bonn: 0049 228 19 27 0 & 0049 228 28 7 3 32 11
Erfurt: 0049 361 73 07 30
Freiburg: 0049 761 16 24 0
Göttingen: 0049 51 19 24 0 & 0049 551 38 31 80
Homburg: 0049 6841 19 24 0
Mainz: 0049 6131 19 24 0 & 0049 6131 23 24 66
München: 0049 89 19 24 0
Nürnberg: 0049 911 39 8 2 45 1
EUROPE: +32 35 75 1234
France ORFILA: +33(0)145425959
ASIA: +65 6336-6011
China: +86 20 39377888
+86 532 83889090
India: + 91 22 42 87 5333
Australia: 1800 786 152
New Zealand: 0800 767 437
USA: +1 800-424-9300

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P273 Avoid release to the environment.

Disposal:

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Additional Labelling

EUH208 Contains 3-aminopropyltriethoxysilane. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol	116-37-0 204-137-9 01-2119888247-23	Aquatic Chronic 2; H411	>= 2,5 - < 10
propylidynetrimethanol	77-99-6 201-074-9 01-2119486799-10	Repr. 2; H361	>= 1 - < 3
3-aminopropyltriethoxysilane	919-30-2 213-048-4 612-108-00-0 01-2119480479-24	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1B; H317 Acute toxicity estimate Acute oral toxicity:	>= 0,1 - < 1

		1 491 mg/kg	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Treat symptomatically.
Get medical attention if symptoms occur.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Avoid inhalation, ingestion and contact with skin and eyes.
No action shall be taken involving any personal risk or without suitable training.
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : If on skin, rinse well with water.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam

Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : Exercise caution when using a high volume water jet as it may scatter and spread fire

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : No data is available on the product itself.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., See Section 1 for emergency contact information., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Keep in properly labelled containers.
Advice on common storage	:	For incompatible materials please refer to Section 10 of this SDS.
Storage class (TRGS 510)	:	10
Further information on storage stability	:	Stable under normal conditions.
Recommended storage temperature	:	2 - 40 °C

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
.epsilon.-Caprolactone, oligomeric reaction products with propylidynetrimethano	Workers	Inhalation	Long-term systemic effects	3,5 mg/m3

l				
	Workers	Dermal	Long-term systemic effects	1,1 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,6 mg/kg
	Consumers	Oral	Long-term systemic effects	0,6 mg/kg
1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol	Workers	Dermal	Long-term systemic effects	1,74 mg/kg
	Workers	Inhalation	Long-term systemic effects	12,2 mg/m3
	Workers	Inhalation	Systemic effects	12,2 mg/m3
	Consumers	Oral	Long-term systemic effects	1,04 mg/kg
	Consumers	Inhalation	Long-term systemic effects	3,6 mg/m3
	Consumers	Inhalation	Systemic effects	3,6 mg/m3
	Consumers	Dermal	Long-term systemic effects	1,04 mg/kg
.epsilon.-Caprolactone, oligomeric reaction products with propylidynetrimethanol	Workers	Inhalation	Long-term systemic effects	3,5 mg/m3
	Workers	Dermal	Long-term systemic effects	1,1 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,6 mg/kg
	Consumers	Oral	Long-term systemic effects	0,6 mg/kg
3-aminopropyltriethoxysilane	Workers	Inhalation	Long-term systemic effects	59 mg/m3
	Workers	Inhalation	Systemic effects, Short-term exposure	59 mg/m3
	Workers	Dermal	Long-term systemic effects	8,3 mg/kg bw/day
	Workers	Dermal	Systemic effects, Short-term exposure	8,3 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	17,4 mg/m3
	Consumers	Inhalation	Systemic effects, Short-term exposure	17,4 mg/m3
	Consumers	Dermal	Long-term systemic effects	5 mg/kg bw/day
	Consumers	Dermal	Systemic effects, Short-term exposure	5 mg/kg bw/day

propylidynetrimethanol	Workers	Inhalation	Long-term systemic effects	3,3 mg/m3
	Workers	Dermal	Long-term systemic effects	0,94 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,58 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,34 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0,34 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
.epsilon.-Caprolactone, oligomeric reaction products with propylidynetrimethanol	Fresh water	0,15 mg/l
	Marine water	0,015 mg/l
	Freshwater - intermittent	1,5 mg/l
	Sewage treatment plant	670 mg/l
1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol	Fresh water	2,3 µg/l
	Marine water	0,23 µg/l
	Freshwater - intermittent	23 µg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0,64 mg/kg
	Marine sediment	0,064 mg/kg
	Soil	0,13 mg/kg
.epsilon.-Caprolactone, oligomeric reaction products with propylidynetrimethanol	Fresh water	0,15 mg/l
	Marine water	0,015 mg/l
	Freshwater - intermittent	1,5 mg/l
	Sewage treatment plant	670 mg/l
Siloxanes and silicones, di-Me, reaction products with silica	Fresh water sediment	> 100 mg/kg
	Remarks:Assessment Factors	
	Soil	23 mg/kg
	Remarks:Assessment Factors	
3-aminopropyltriethoxysilane	Fresh water	0,33 mg/l
	Remarks:Assessment Factors	
	Marine water	0,033 mg/l
	Remarks:Assessment Factors	
	Sewage treatment plant	13 mg/l
	Remarks:Assessment Factors	
	Fresh water sediment	1,2 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Marine sediment	0,12 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Soil	0,05 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	

8.2 Exposure controls

Personal protective equipment

Eye/face protection	:	Eye wash bottle with pure water Tightly fitting safety goggles
Hand protection		
Material	:	butyl-rubber
Break through time	:	> 8 h
Material	:	Nitrile rubber
Break through time	:	10 - 480 min
Material	:	Ethyl Vinyl Alcohol Laminate (EVAL)
Break through time	:	> 8 h
Remarks	:	The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines Recommended Filter type: Combined particulates and organic vapour type
Filter type	:	Filter type A-P

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	paste
Colour	:	opaque
Odour	:	slight
Odour Threshold	:	No data is available on the product itself.
pH	:	substance/mixture is non-soluble (in water)
Melting point/freezing point	:	No data is available on the product itself.
Boiling point	:	> 250 °C
Flash point	:	> 250 °C

Method: Pensky-Martens closed cup, closed cup

Flammability (solid, gas)	:	No data is available on the product itself.
Upper explosion limit / Upper flammability limit	:	No data is available on the product itself.
Lower explosion limit / Lower flammability limit	:	No data is available on the product itself.
Vapour pressure	:	< 2 hPa (20 °C)
Relative vapour density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	1,1 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	practically insoluble (20 °C)
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.
Decomposition temperature	:	> 250 °C
Viscosity		
Viscosity, dynamic	:	3 000 - 6 000 mPa.s (25 °C)

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Acute toxicity

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Acute oral toxicity : LD50 (Rat, male and female): > 2.75 - < 3.3 g/kg
Method: OECD Test Guideline 401
Assessment: The component/mixture is low toxic after single ingestion.

Acute dermal toxicity : LD50 (Rat, male and female): > 2 000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

propylidynetrimethanol:

Acute oral toxicity : LD50 (Rat, male): ca. 14 700 mg/kg
Method: OECD Test Guideline 401
GLP: no
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male): > 850 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Directive 67/548/EEC, Annex V, B.2.
GLP: no
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 10 000 mg/kg
Method: OECD Test Guideline 402
GLP: no
Assessment: The substance or mixture has no acute dermal toxicity

3-aminopropyltriethoxysilane:

Acute oral toxicity : LD50 (Rat, male and female): 1 491 - 2 688 mg/kg
Method: Acute Oral Toxicity

Acute toxicity estimate: 1 491 mg/kg
Method: Calculation method

Acute inhalation toxicity : LC50 (Rat, male): > 5 ppm
Exposure time: 6 h

Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, male and female): 4 075 mg/kg
Method: Acute Dermal Toxicity
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Species	:	Rabbit
Assessment	:	No skin irritation
Result	:	No skin irritation

propylidynetrimethanol:

Species	:	Rabbit
Exposure time	:	24 h
Assessment	:	No skin irritation
Method	:	Directive 67/548/EEC, Annex V, B.4.
Result	:	No skin irritation

3-aminopropyltriethoxysilane:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Causes burns.

Serious eye damage/eye irritation

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

propylidynetrimethanol:

Species	:	Rabbit
Assessment	:	No eye irritation
Result	:	No eye irritation
GLP	:	no

3-aminopropyltriethoxysilane:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Risk of serious damage to eyes.

Respiratory or skin sensitisation

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Exposure routes	:	Skin
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitisation.

propylidynetrimethanol:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin
Species	:	Mouse
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 429
Result	:	Did not cause sensitisation on laboratory animals.
GLP	:	yes

3-aminopropyltriethoxysilane:

Exposure routes	:	Skin
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	The product is a skin sensitiser, sub-category 1B.

Germ cell mutagenicity

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Genotoxicity in vitro	:	Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male) Cell type: Bone marrow Dose: 500, 1000, 2000 mg/kg body Method: OECD Test Guideline 474

propylidynetrimethanol:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Test system: Salmonella tryphimurium and E. coli Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

3-aminopropyltriethoxysilane:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
General Toxicity - Parent: NOAEL: 125 mg/kg body weight
Fertility: NOAEL: 250 mg/kg body weight
Early Embryonic Development: NOAEL: > 500 mg/kg body weight
Method: OECD Test Guideline 422

Effects on foetal development : Species: Rat, female
Application Route: Oral
Dose: 0, 40, 100, 250 milligram per kilogram
General Toxicity Maternal: NOAEL: 100 mg/kg body weight
Developmental Toxicity: NOAEL: > 250 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects

propylidynetrimethanol:

Effects on fertility : Test Type: Reproduction / Developmental Toxicity Screening Test
Species: Rat, male and female

Application Route: Oral
Dose: 0/250/500/1000 mg/kg bw/day
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEL: > 1 000 mg/kg body weight
General Toxicity F1: NOAEL: > 1 000 mg/kg body weight
Method: OECD Test Guideline 421
Result: negative
GLP: yes

Species: Rat, male and female
Application Route: Oral
Dose: 0/740/2200/6600 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEL: 2 200 ppm
General Toxicity F1: NOAEL: 2 200 ppm
General Toxicity F2: NOAEL: 740 parts per million
Method: OECD Test Guideline 443
GLP: yes

Effects on foetal development : Test Type: Pre-natal
Species: Rabbit, female
Application Route: Oral
Duration of Single Treatment: 24 d
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEL: >= 450 mg/kg body weight
Developmental Toxicity: NOAEL: 450 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
Dose: 0 / 100 / 300/ 1000 mg/kg bw/
Duration of Single Treatment: 15 d
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEL: 100 mg/kg body weight
Developmental Toxicity: NOEL: 100 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Species : Rat, male and female
NOAEL : 125 mg/kg

Application Route	:	Ingestion
Exposure time	:	696 h
Number of exposures	:	7 d
Method	:	Subacute toxicity

propylidynetrimethanol:

Species	:	Rat, male and female
NOEC	:	67 mg/kg
Application Route	:	oral (feed)
Exposure time	:	90 d
Number of exposures	:	7 days/week
Dose	:	20, 67, 200, 667 mg/kg bw/d
Method	:	Subchronic toxicity

3-aminopropyltriethoxysilane:

Species	:	Rat, male and female
NOAEL	:	200 mg/kg
Application Route	:	Ingestion
Exposure time	:	2 160 h
Method	:	Subchronic toxicity

Aspiration toxicity

No data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

Experience with human exposure

No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 8,8 mg/l Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2,3 mg/l Exposure time: 48 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 28 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201 NOEC (Selenastrum capricornutum (green algae)): 2,5 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	1 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test Method: OECD Test Guideline 211

propylidynetrimethanol:

Toxicity to fish	:	LC50 (Fish): > 1 000 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 13 000 mg/l Exposure time: 48 h Test Type: static test Test substance: Fresh water Method: ASTM Method, other GLP: no
Toxicity to algae/aquatic plants	:	EbC50 (Selenastrum capricornutum (green algae)): > 1 000 mg/l Exposure time: 72 h Test substance: Fresh water Method: OECD Test Guideline 201 GLP: no

Toxicity to microorganisms	:	EC50 : > 1 000 mg/l Exposure time: 3 h Test substance: Fresh water Method: Directive 67/548/EEC, Annex V, C.11
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 1 000 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: static test Test substance: Fresh water GLP: no

3-aminopropyltriethoxysilane:

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 934 mg/l Exposure time: 96 h Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 331 mg/l Exposure time: 48 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 1 000 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: Directive 67/548/EEC, Annex V, C.3.
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 43 mg/l Exposure time: 5,75 h Test Type: static test Test substance: Fresh water

12.2 Persistence and degradability

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Biodegradability	:	Inoculum: activated sludge Concentration: 200 mg/l Result: Not biodegradable Biodegradation: 60 % Exposure time: 98 d Method: OECD Test Guideline 301D
Stability in water	:	Degradation half life (DT50): > 1 yr (25 °C) pH: 7 Method: OECD Test Guideline 111 Remarks: Fresh water

Degradation half life (DT50): > 1 yr (25 °C)
pH: 4
Method: OECD Test Guideline 111
Remarks: Fresh water

Degradation half life (DT50): > 1 yr (25 °C)
pH: 9
Method: OECD Test Guideline 111
Remarks: Fresh water

propylidynetrimethanol:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 100 mg/l
Result: Inherently biodegradable.
Biodegradation: 100 %
Related to: Dissolved organic carbon (DOC)
Exposure time: 28 d
Method: OECD Test Guideline 302B
GLP: yes

Inoculum: activated sludge, non-adapted
Concentration: 19 mg/l
Result: Not readily biodegradable.
Biodegradation: 6 %
Related to: Dissolved organic carbon (DOC)
Exposure time: 28 d
Method: OECD Test Guideline 301E
GLP: yes

3-aminopropyltriethoxysilane:

Biodegradability : Inoculum: activated sludge
Concentration: 8,95 mg/l
Result: Not readily biodegradable.
Biodegradation: 67 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.A.

12.3 Bioaccumulative potential

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Partition coefficient: n-octanol/water : log Pow: 3,3 - 3,6 (25 °C)
pH: 7
Method: OECD Test Guideline 117

propylidynetrimethanol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 42 d
Bioconcentration factor (BCF): < 17
Test substance: Marine water
Method: flow-through test

Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: -0,47 (26 °C)

3-aminopropyltriethoxysilane:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 3,4
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 1,7 (20 °C)
pH: 7

12.4 Mobility in soil

Components:

1,1'-isopropylidenebis(p-phenyleneoxy)dipropan-2-ol:

Distribution among environmental compartments : Koc: 1819 - 2754
Method: OECD Test Guideline 121

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of contents/ container to an approved waste disposal plant.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number or ID number

UNRTDG : Not regulated as dangerous goods
ADN : Not regulated as dangerous goods
ADR : Not regulated as dangerous goods
RID : Not regulated as dangerous goods
IMDG : Not regulated as dangerous goods
IATA : Not regulated as dangerous goods

14.2 UN proper shipping name

UNRTDG : Not regulated as dangerous goods
ADN : Not regulated as dangerous goods
ADR : Not regulated as dangerous goods
RID : Not regulated as dangerous goods
IMDG : Not regulated as dangerous goods
IATA : Not regulated as dangerous goods

14.3 Transport hazard class(es)

ADN : Not regulated as dangerous goods
ADR : Not regulated as dangerous goods
RID : Not regulated as dangerous goods
IMDG : Not regulated as dangerous goods
IATA : Not regulated as dangerous goods

14.4 Packing group

ADN : Not regulated as dangerous goods
ADR : Not regulated as dangerous goods
RID : Not regulated as dangerous goods
IMDG : Not regulated as dangerous goods
IATA (Cargo) : Not regulated as dangerous goods
IATA (Passenger) : Not regulated as dangerous goods

14.5 Environmental hazards

Not regulated as dangerous goods

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 bis(dodecylthio)dioctylstannane (Number on list 20)
Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances		Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.		Not applicable
Water hazard class (Germany)	:	WGK 2 obviously hazardous to water Classification according to AwSV, Annex 1 (5.2)

The components of this product are reported in the following inventories:

DSL	:	All components of this product are on the Canadian DSL
AIIC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory

KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory

Inventories

AICS (Australia), AIIC (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

15.2 Chemical safety assessment

Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H361	:	Suspected of damaging fertility or the unborn child.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Repr.	:	Reproductive toxicity
Skin Corr.	:	Skin corrosion
Skin Sens.	:	Skin sensitisation

Further information

Classification of the mixture:		**Classification procedure:**
Aquatic Chronic 3	H412	Calculation method

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IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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