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

1.1 Product identifier

Trade name : ARALDITE® 2053-05 A

Unique Formula Identifier (UFI) : YSG5-U0DP-S00N-HGWN

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

Use of the Substance/Mixture : Resin

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 : Centres Antipoison et de Toxicovigilance:
ANGERS: 02 41 48 21 21
BORDEAUX: 05 56 96 40 80
LILLE: 0 825 812 822
LYON: 04 72 11 69 11
MARSEILLE 04 91 75 25 25
NANCY: 03 83 32 36 36
PARIS: 01 40 05 48 48
RENNES: 02 99 59 22 22
STRASBOURG: 03 88 37 37 37
TOULOUSE: 05 61 77 74 47
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)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
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 pictograms :

Signal word : Danger

Hazard statements :

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P261	Avoid breathing mist or vapours.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P370 + P378	In case of fire: Use dry sand, dry chemical

or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:

methyl methacrylate
methacrylic acid
octadecyl methacrylate
2,2'-[(4-methylphenyl)imino]bisethanol

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

Chemical nature : Adhesives

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
methyl methacrylate	80-62-6 201-297-1 607-035-00-6 01-2119452498-28	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Skin Sens. 1; H317 STOT SE 3; H335 (Respiratory system)	>= 50 - < 70
methacrylic acid	79-41-4 201-204-4 607-088-00-5 01-2119463884-26	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 3; H311 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) specific concentration limit STOT SE 3; H335 >= 1 % Skin Corr. 1A; H314 >= 10 % Skin Irrit. 2; H315 1 - < 10 %	>= 5 - < 10

		Eye Dam. 1; H318 >= 3 % Eye Irrit. 2A; H319 1 - < 3 %	
octadecyl methacrylate	32360-05-7 251-013-5 607-134-00-4 01-2119489777-13	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) specific concentration limit STOT SE 3; H335 >= 10 %	>= 1 - < 10
hexadecyl methacrylate	2495-27-4 219-672-3 607-134-00-4 01-2119489776-15	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) specific concentration limit STOT SE 3; H335 >= 10 %	>= 1 - < 10
zinc oxide	1314-13-2 215-222-5 030-013-00-7 01-2119463881-32	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 1 - < 2,5
2,2'-[(4-methylphenyl)imino]bisethanol	3077-12-1 221-359-1 01-2120791684-40	Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 1 - < 2,5
Ɛ-Caprolactone, oligomers, esters with 2-hydroxyethyl methacrylate, phosphate	2548699-72-3 500-310-0 -	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system)	>= 1 - < 10

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 skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	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	:	Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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	:	Neutralize with chalk, alkali solution or ammonia. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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. Take precautionary measures against static discharges. Open drum carefully as content may be under pressure. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against fire and explosion	:	Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
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	:	No smoking. 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	:	Keep away from strong bases.
Recommended storage temperature	:	2 - 8 °C
Further information on storage stability	:	Stable under normal conditions.

7.3 Specific end use(s)

Specific use(s)	:	No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
methyl methacrylate	80-62-6	TWA	50 ppm	2009/161/EU
Further information	Indicative			
		STEL	100 ppm	2009/161/EU
Further information	Indicative			
		VME	50 ppm 205 mg/m3	FR VLE
Further information	Regulatory binding exposure limits			
		VLCT (VLE)	100 ppm 410 mg/m3	FR VLE
Further information	Regulatory binding exposure limits			
methacrylic acid	79-41-4	VME	20 ppm 70 mg/m3	FR VLE
Further information	Indicative exposure limits			
calcium carbonate	471-34-1	VME	10 mg/m3	FR VLE
Further information	Indicative exposure limits			
zinc oxide	1314-13-2	VME (Fumes)	5 mg/m3	FR VLE
Further information	Indicative exposure limits			
		VME (Dust)	10 mg/m3	FR VLE
Further information	Indicative exposure limits			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
2,2'-[(4-methylphenyl)imino]bisethanol	Workers	Inhalation	Long-term systemic effects	3,29 mg/m3
	Workers	Dermal	Long-term systemic effects	0,47 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,58 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,17 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0,16 mg/kg bw/day
calcium carbonate	Workers	Inhalation	Long-term local effects	6,36 mg/m3
	Consumers	Inhalation	Long-term local effects	1,06 mg/m3
methacrylic acid	Workers	Inhalation	Long-term systemic effects	29,6 mg/m3
	Workers	Inhalation	Long-term local effects	88 mg/m3
	Workers	Dermal	Long-term systemic effects	4,25 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic	6,3 mg/m3

			effects	
	Consumers	Inhalation	Long-term local effects	6,55 mg/m3
	Consumers	Dermal	Long-term systemic effects	2,55 mg/kg bw/day
calcium molybdate	Workers	Inhalation	Long-term systemic effects	11,17 mg/m3
	Workers	Inhalation	Systemic effects	11,17 mg/m3
	Consumers	Inhalation	Long-term systemic effects	3,33 mg/m3
	Consumers	Inhalation	Systemic effects	3,33 mg/m3
	Consumers	Oral	Long-term systemic effects	4,85 mg/kg
	Consumers	Oral	Systemic effects	
Silicon, amorphous	Workers	Inhalation	Long-term systemic effects	4 mg/m3
zinc oxide	Workers	Dermal	Long-term systemic effects	83 mg/kg
	Workers	Inhalation	Long-term systemic effects	5 mg/m3
	Consumers	Dermal	Long-term systemic effects	83 mg/kg
	Consumers	Inhalation	Long-term systemic effects	2,5 mg/m3
	Consumers	Oral	Long-term systemic effects	0,83 mg/kg
	Workers	Inhalation	Long-term local effects	0,5 mg/m3

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

Substance name	Environmental Compartment	Value
2,2'-[(4-methylphenyl)imino]bisethanol	Fresh water	0,026 mg/l
	Remarks:Assessment Factors	
	Marine water	0,003 mg/l
	Remarks:Assessment Factors	
	Sewage treatment plant	10 mg/l
	Remarks:Assessment Factors	
	Fresh water sediment	0,121 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Marine sediment	0,012 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Soil	0,009 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
methacrylic acid	Fresh water	0,82 mg/l
	Remarks:Assessment Factors	
	Marine water	0,82 mg/l
	Remarks:Assessment Factors	
	Freshwater - intermittent	0,82 mg/l
	Remarks:Assessment Factors	
	Sewage treatment plant	10 mg/l

	Remarks:Assessment Factors	
	Soil	1,2 mg/kg
	Remarks:Equilibrium method	
calcium molybdate	Fresh water	12,7 mg/l
	Marine water	1,91 mg/l
	Sewage treatment plant	21,7 mg/l
	Fresh water sediment	22600 mg/kg
	Marine sediment	1984 mg/kg
	Soil	39 mg/kg
zinc oxide	Fresh water	20,6 µg/l
	Marine water	6,1 µg/l
	Sewage treatment plant	100 µg/l
	Remarks:Assessment Factors	
	Fresh water sediment	117,8 mg/kg dry weight (d.w.)
	Marine sediment	56,5 mg/kg dry weight (d.w.)
	Remarks:Equilibrium method	
	Soil	35,6 mg/kg dry weight (d.w.)

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : butyl-rubber

Material : Ethyl Vinyl Alcohol Laminate (EVAL)
Break through time : > 8 h

Material : Nitrile rubber
Break through time : 10 - 480 min

Remarks : 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 : Ensure adequate ventilation.
Suitable respiratory equipment:

Respirator with a half face mask
Recommended Filter type:
Combined particulates and organic vapour type
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : Filter type A-P2 (organic vapours, particles)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	paste
Colour	:	beige
Odour	:	acrylic-like
Odour Threshold	:	No data is available on the product itself.
pH	:	4 Concentration: 500 g/l
Melting point/freezing point	:	No data is available on the product itself.
Boiling point	:	No data is available on the product itself.
Flash point	:	10 °C Method: estimated
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	:	No data is available on the product itself.
Relative vapour density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	1,03 g/cm3 (25 °C)
Solubility(ies)		
Water solubility	:	insoluble, immiscible
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	:	No data is available on the product itself.
Viscosity		
Viscosity, dynamic	:	32 200 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	:	Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Strong acids and strong bases Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products	:	carbon dioxide carbon monoxide

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2 000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2 000 mg/kg Method: Calculation method

Components:

methyl methacrylate:

Acute oral toxicity : LD50 (Rat): 7 900 - 9 400 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 29,8 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Directive 67/548/EEC, Annex V, B.2.

Acute dermal toxicity : LD50 (Rabbit, male): > 5 000 mg/kg
Method: OECD Test Guideline 402

methacrylic acid:

Acute oral toxicity : LD50 (Rat, male): 1 320 mg/kg
Method: OECD Test Guideline 401
GLP: no
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat, male and female): 7,1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
GLP: yes
Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rabbit): 500 - 1 000 mg/kg
GLP: no
Assessment: The component/mixture is toxic after single contact with skin.

octadecyl methacrylate:

Acute oral toxicity : LD50 (Rat, male and female): > 5 000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 3 000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

hexadecyl methacrylate:

Acute oral toxicity : LD50 (Rat, male and female): > 5 000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 3 000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

zinc oxide:

Acute oral toxicity : LD50 (Rat, male and female): > 5 000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5,7 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2 000 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The substance or mixture has no acute dermal toxicity

2,2'-[(4-methylphenyl)imino]bisethanol:

Acute oral toxicity	:	LD50 (Rat, male and female): 959 mg/kg Method: OECD Test Guideline 401 GLP: no Assessment: The component/mixture is moderately toxic after single ingestion.
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2 000 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Components:

methyl methacrylate:

Species	:	Rabbit
Method	:	OPPTS 870.2500
Result	:	Skin irritation

methacrylic acid:

Species	:	Rabbit
Assessment	:	Causes severe burns.
Method	:	OECD Test Guideline 404
Result	:	Extremely corrosive and destructive to tissue.
GLP	:	yes

octadecyl methacrylate:

Result	:	Skin irritation

hexadecyl methacrylate:

Result	:	Skin irritation

zinc oxide:

Species	:	Rabbit
Assessment	:	No skin irritation

Method : OECD Test Guideline 404
Result : No skin irritation

2,2'-[(4-methylphenyl)imino]bisethanol:

Species : Rabbit
Assessment : No skin irritation
Method : Other guidelines
Result : No skin irritation
GLP : no

Ɛ-Caprolactone, oligomers, esters with 2-hydroxyethyl methacrylate, phosphate:

Assessment : Irritating to skin.

Serious eye damage/eye irritation

Components:

methacrylic acid:

Species : Rabbit
Assessment : Risk of serious damage to eyes.
Method : Draize Test
Result : Irreversible effects on the eye
GLP : no

octadecyl methacrylate:

Result : Eye irritation

hexadecyl methacrylate:

Result : Eye irritation

zinc oxide:

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

2,2'-[(4-methylphenyl)imino]bisethanol:

Species : Rabbit
Assessment : Risk of serious damage to eyes.
Method : OECD Test Guideline 405
Result : Risk of serious damage to eyes.
GLP : no

Ɛ-Caprolactone, oligomers, esters with 2-hydroxyethyl methacrylate, phosphate:

Assessment : Irritating to eyes.

Respiratory or skin sensitisation

Components:

methyl methacrylate:

Exposure routes	:	Skin
Species	:	Mouse
Assessment	:	May cause sensitisation by skin contact.
Method	:	OECD Test Guideline 429
Result	:	May cause sensitisation by skin contact.

methacrylic acid:

Test Type	:	Buehler Test
Exposure routes	:	Skin
Species	:	Guinea pig
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitisation on laboratory animals.

octadecyl methacrylate:

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

hexadecyl methacrylate:

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

zinc oxide:

Exposure routes	:	Skin
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.

2,2'-[(4-methylphenyl)imino]bisethanol:

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Assessment	:	May cause sensitisation by skin contact.
Method	:	OECD Test Guideline 429
Result	:	May cause sensitisation by skin contact.
GLP	:	yes
Remarks	:	Information given is based on data obtained from similar substances.

Germ cell mutagenicity

Components:

methyl methacrylate:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Method: OECD Test Guideline 471
Result: negative

methacrylic acid:

Genotoxicity in vitro : Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay
Species: Rat (male)
Cell type: Somatic
Application Route: Inhalation
Exposure time: 2 h
Dose: 0.4, 1.6, 2.8 and 4 mg/L
Method: OECD Test Guideline 475
Result: Not classified due to inconclusive data.
GLP: no

Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Inhalation
Exposure time: 6 h
Dose: 0.405, 4.05 and 36.45 mg/L
Method: OECD Test Guideline 478
Result: negative
GLP: no

octadecyl methacrylate:

Genotoxicity in vitro : Concentration: .1 - 1200 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Concentration: 33 - 5000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Concentration: 14.5 - 2233 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Application Route: Oral
Exposure time: 72 h

Dose: 5000 mg/kg
Method: OECD Test Guideline 474
Result: negative

hexadecyl methacrylate:

Genotoxicity in vitro : Concentration: .1 - 1200 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Concentration: 33 - 5000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Concentration: 14.5 - 2233 µg/L
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Application Route: Oral
Exposure time: 72 h
Dose: 5000 mg/kg
Method: OECD Test Guideline 474
Result: negative

zinc oxide:

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

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
GLP: yes

Test Type: Micronucleus test
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 487
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Dose: 15, 30 and 60 mg/kg bw
Method: OECD Test Guideline 474
Result: negative

2,2'-[(4-methylphenyl)imino]bisethanol:

Genotoxicity in vitro : Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: no

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Components:

methyl methacrylate:

Species	:	Rat, male and female
Application Route	:	Oral
Exposure time	:	2 Years
Dose	:	6, 60, 2000 ppm
Frequency of Treatment	:	once daily
NOAEL	:	90,3 mg/kg bw/day
Result	:	negative

methacrylic acid:

Species	:	Rat, male and female
Application Route	:	inhalation (vapour)
Exposure time	:	102 weeks
Frequency of Treatment	:	5 days/week
NOAEL	:	>= 2,05 mg/kg body weight
Method	:	OECD Test Guideline 451

Species	:	Mouse, male and female
Application Route	:	inhalation (vapour)
Exposure time	:	102 weeks
Dose	:	ca. 2.05 and 4.1 mg/L
Frequency of Treatment	:	5 days/week
LOAEL	:	ca. 2,05 mg/l
Method	:	OECD Test Guideline 451

zinc oxide:

Species	:	Mouse, male and female
Application Route	:	Oral
Exposure time	:	1 year
Dose	:	1000 and 5000 ppm Zinc
Frequency of Treatment	:	daily
NOAEL	:	> 22 000 mg/kg body weight
Remarks	:	Information given is based on data obtained from similar substances.

Reproductive toxicity

Components:

methyl methacrylate:

Effects on foetal development	:	Species: Rat Application Route: Inhalation Dose: 99, 304, 1178 ppm Teratogenicity: NOAEC F1: 8 300 mg/m³ Embryo-foetal toxicity: NOAEC F1: 8 300 mg/m³ Method: OECD Test Guideline 414 Result: No teratogenic effects

methacrylic acid:

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Dose: 0, 50, 150, 450 mg/kg/day General Toxicity - Parent: NOAEL: 50 mg/kg body weight Fertility: NOAEL F1: 400 mg/kg body weight Symptoms: Reduced body weight Method: OECD Test Guideline 416 GLP: yes
Effects on foetal development	:	Test Type: Pre-natal Species: Rat, female Application Route: Inhalation Dose: 0, 50, 100, 200 or 300 ppm Duration of Single Treatment: 14 d Frequency of Treatment: 7 days/week General Toxicity Maternal: NOAEL: 200 ppm Developmental Toxicity: NOAEL: >= 300 ppm Embryo-foetal toxicity: NOAEC F1: 300 ppm Method: OECD Test Guideline 414 Result: No effects on fertility and early embryonic development were detected. Test Type: Pre-natal Species: Rabbit, male and female Application Route: Oral Dose: 50, 150, 450 milligram per kilogram Duration of Single Treatment: 23 d Frequency of Treatment: 7 days/week General Toxicity Maternal: NOAEL: 50 mg/kg body weight

Developmental Toxicity: NOAEL F1: 450 mg/kg body weight
Result: No effects on fertility and early embryonic development were detected.

octadecyl methacrylate:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Dose: >= 1000 milligram per kilogram
Frequency of Treatment: 7 days/week
Method: OECD Test Guideline 422
Result: negative

Species: Rat, male and female
Application Route: Oral
Dose: 400 milligram per kilogram
Frequency of Treatment: 7 days/week
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development : Species: Rat, male and female
Application Route: Oral
General Toxicity Maternal: NOAEL: 1 000 mg/kg body weight
Method: OECD Test Guideline 422
Result: No teratogenic effects

Species: Rat, female
Application Route: Inhalation
General Toxicity Maternal: NOAEL: 100 ppm
Method: OECD Test Guideline 414
Result: No teratogenic effects

hexadecyl methacrylate:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Dose: >=1000 milligram per kilogram
Frequency of Treatment: 7 days/week
Method: OECD Test Guideline 422
Result: negative

Species: Rat, male and female
Application Route: Oral
Frequency of Treatment: 7 days/week
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development : Species: Rat, male and female
Application Route: Oral
General Toxicity Maternal: NOAEL: 1 000 mg/kg body weight
Method: OECD Test Guideline 422
Result: No teratogenic effects

Species: Rat, female
Application Route: Inhalation
General Toxicity Maternal: NOAEL: 100 ppm

Method: OECD Test Guideline 414
Result: No teratogenic effects

zinc oxide:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 7.5/15/30 mg/kg bw/day
General Toxicity - Parent: LOAEL: 7,5 mg/kg body weight
General Toxicity F1: NOAEL: 15 mg/kg body weight
Method: OECD Test Guideline 416
Remarks: Information given is based on data obtained from similar substances.

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Application Route: inhalation (dust/mist/fume)
Dose: 0.3/1.5/7.5 mg/m3
Duration of Single Treatment: 6 h
General Toxicity Maternal: NOAEC: 1,5 mg/m³
Developmental Toxicity: NOAEC: 7,5 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects

2,2'-[(4-methylphenyl)imino]bisethanol:

Effects on foetal development : Test Type: Pre-natal
Species: Rat, females
Application Route: Oral
Dose: 60/200/600 milligram per kilogram
Duration of Single Treatment: 15 d
General Toxicity Maternal: NOAEL: 200 mg/kg body weight
Developmental Toxicity: NOAEL: >= 600 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

STOT - single exposure

Components:

methyl methacrylate:

Exposure routes : Inhalation
Target Organs : Respiratory Tract
Assessment : May cause respiratory irritation.

methacrylic acid:

Exposure routes : Inhalation
Target Organs : Respiratory Tract
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

octadecyl methacrylate:

Exposure routes	:	Inhalation
Target Organs	:	Respiratory Tract
Assessment	:	May cause respiratory irritation.

hexadecyl methacrylate:

Exposure routes	:	Inhalation
Target Organs	:	Respiratory Tract
Assessment	:	May cause respiratory irritation.

Ɛ-Caprolactone, oligomers, esters with 2-hydroxyethyl methacrylate, phosphate:

Exposure routes	:	Inhalation
Target Organs	:	Respiratory system
Assessment	:	May cause respiratory irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

methyl methacrylate:

Species	:	Rat, male and female
NOAEL	:	124,1 mg/kg
Application Route	:	oral (drinking water)
Exposure time	:	2 years
Number of exposures	:	daily
Dose	:	6, 60, 2000 ppm

methacrylic acid:

Species	:	Rat, male and female
NOEC	:	352 - 1232 mg/m3
Application Route	:	inhalation (vapour)
Test atmosphere	:	vapour
Exposure time	:	90 d
Number of exposures	:	6 h
Dose	:	70/352/1232 mg/m3
Subsequent observation period	:	5 days/week
Method	:	OECD Test Guideline 413
GLP	:	yes

octadecyl methacrylate:

Species	:	Rat, male and female
NOAEL	:	1000 mg/kg
Application Route	:	Ingestion
Number of exposures	:	7 d
Method	:	Subchronic toxicity

Species	:	Rat, male and female
NOAEL	:	120 mg/kg

Application Route	:	Ingestion
Exposure time	:	2 160 h
Number of exposures	:	7 d
Method	:	Subchronic toxicity

hexadecyl methacrylate:

Species	:	Rat, male and female
NOAEL	:	1000 mg/kg
Application Route	:	Ingestion
Number of exposures	:	7 d
Method	:	Subchronic toxicity

Species	:	Rat, male and female
NOAEL	:	120 mg/kg
Application Route	:	Ingestion
Exposure time	:	2 160 h
Number of exposures	:	7 d
Method	:	Subchronic toxicity

zinc oxide:

Species	:	Mouse, male and female
NOEL	:	3000 ppm
Application Route	:	Ingestion
Exposure time	:	13 Weeks
Number of exposures	:	7 d
Method	:	Subchronic toxicity
Remarks	:	Information given is based on data obtained from similar substances.

Species	:	Rat, male
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	13 weeks 6 h
Number of exposures	:	5 days/week
Dose	:	0.3, 1.5 and 4.5 mg/m3
Method	:	OECD Test Guideline 413
GLP	:	yes

Species	:	Rat, male and female
LOAEL	:	75 mg/kg
Application Route	:	Dermal
Exposure time	:	28 days 6 h
Number of exposures	:	5 days/week
Dose	:	0, 75, 180, and 360 mg/kg bw/d

2,2'-[(4-methylphenyl)imino]bisethanol:

Species	:	Rat, male and female
NOAEL	:	100 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Number of exposures	:	daily
Dose	:	100/300/600/1000 mg/kg bw/day
Method	:	OECD Test Guideline 407
GLP	:	yes

Remarks : Information given is based on data obtained from similar substances.

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

Product:

Remarks : Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

methyl methacrylate:

Toxicity to fish	:	LC50 : 191 mg/l Exposure time: 96 h LC50 (Oncorhynchus mykiss (rainbow trout)): > 79 mg/l Exposure time: 96 h Test Type: flow-through test Method: Fish Early-life Stage Toxicity Test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 : 69 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 : > 110 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 37 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Test Type: flow-through test
Method: OECD Test Guideline 211

methacrylic acid:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 85 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water
Method: Fish Acute Toxicity Test
GLP: yes
Remarks: Toxic to aquatic organisms.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 130 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: flow-through test
Analytical monitoring: yes
Test substance: Fresh water
Method: Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): 45 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201
GLP: yes

NOEC (Selenastrum capricornutum (green algae)): 8,2 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (Pseudomonas putida): 270 mg/l
Exposure time: 16,5 h
Test Type: static test
Analytical monitoring: no
Test substance: Fresh water
Method: DIN 38 412 Part 8
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC: 10 mg/l
Exposure time: 35 d
Species: Brachydanio rerio (zebrafish)
Test Type: flow-through test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 210

GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 53 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 211
GLP: yes

zinc oxide:

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

2,2'-[(4-methylphenyl)imino]bisethanol:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 203
GLP: yes
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 48 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 202
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201
GLP: yes

Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201
GLP: yes
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): > 1 000 mg/l
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Test substance: Fresh water
Method: OECD Test Guideline 209
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

12.2 Persistence and degradability

Components:

methyl methacrylate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d

methacrylic acid:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 3 mg/l
Result: Readily biodegradable.
Biodegradation: 86 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

2,2'-[(4-methylphenyl)imino]bisethanol:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 18 mg/l
Result: Not biodegradable
Biodegradation: 1,5 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes
Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

methyl methacrylate:

Bioaccumulation	:	Bioconcentration factor (BCF): 3
Partition coefficient: n-octanol/water	:	log Pow: 1,38

methacrylic acid:

Partition coefficient: n-octanol/water	:	log Pow: 0,93 (22 °C) pH: 2,2

hexadecyl methacrylate:

Partition coefficient: n-octanol/water	:	log Pow: 8,64 Method: QSAR GLP: no

2,2'-[(4-methylphenyl)imino]bisethanol:

Partition coefficient: n-octanol/water	:	log Pow: 2 (35 °C) pH: 7 Method: OECD Test Guideline 117

12.4 Mobility in soil

No data available

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 : Dispose of contents and container in accordance with all local, regional, national and international regulations.
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : UN 1133

ADR : UN 1133

RID : UN 1133

IMDG : UN 1133

IATA : UN 1133

14.2 UN proper shipping name

ADN : ADHESIVES

ADR : ADHESIVES

RID : ADHESIVES

IMDG : ADHESIVES

IATA : Adhesives

14.3 Transport hazard class(es)

ADN : 3

ADR : 3

RID : 3

IMDG : 3

IATA : 3

14.4 Packing group

ADN

Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3

ADR

Packing group	:	II
Classification Code	:	F1
Hazard Identification Number	:	33
Labels	:	3
Tunnel restriction code	:	(D/E)

RID

Packing group	:	II
Classification Code	:	F1
Hazard Identification Number	:	33
Labels	:	3

IMDG

Packing group	:	II
Labels	:	3
EmS Code	:	F-E, S-D

IATA (Cargo)

Packing instruction (cargo aircraft)	:	364
Packing instruction (LQ)	:	Y341
Packing group	:	II
Labels	:	Flammable Liquids

IATA (Passenger)

Packing instruction (passenger aircraft)	:	353
Packing instruction (LQ)	:	Y341
Packing group	:	II
Labels	:	Flammable Liquids

14.5 Environmental hazards

ADN

Environmentally hazardous : no

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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 : Not applicable

(Annex XIV)

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).

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

P5c	FLAMMABLE LIQUIDS

Occupational Illnesses (R-461-3, France)	:	65, 82, 36, 25
Installations classified for the protection of the environment (Environment Code R511-9)	:	4331

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

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

DSL	:	This product contains one or several components that are not on the Canadian DSL nor NDSL.
AIIC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
ENCS	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Notified. Allowed to be imported / manufactured only by the notifiers. Please contact your Huntsman sales representative for more information.
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	On or in compliance with the active portion of 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

H225	:	Highly flammable liquid and vapour.
H302	:	Harmful if swallowed.
H311	:	Toxic in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure
2009/161/EU	:	Europe. COMMISSION DIRECTIVE 2009/161/EU establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
FR VLE	:	France. Occupational Exposure Limits (INRS)
2009/161/EU / TWA	:	Limit Value - eight hours
2009/161/EU / STEL	:	Short term exposure limit
FR VLE / VME	:	Time Weighted Average
FR VLE / VLCT (VLE)	:	Short Term Exposure Limit

Further information

Classification of the mixture:		**Classification procedure:**
Flam. Liq. 2	H225	Based on product data or assessment
Skin Irrit. 2	H315	Calculation method

Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
STOT SE 3	H335	Calculation method
Aquatic Chronic 3	H412	Calculation method

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

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.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.