Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

SECTION 1: Identification

1.1. Product identifier
3M™ Screen Print UV Gloss Clear 9740i

Product Identification Numbers
75-3472-5444-5

1.2. Recommended use and restrictions on use

Recommended use
UV Clear Coat for Graphic Applications, Professional printing ink for use in traffic safety systems.

For Industrial or Professional use only

1.3. Supplier's details
Address: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone: (09) 477 4040
E Mail: innovation@nz.mmm.com
Website: 3m.co.nz

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.
Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Acute Toxicity (oral): Category 4
Acute Toxicity (dermal): Category 4
Skin Corrosion/Irritation: Category 2
Serious Eye Damage/Irritation: Category 1
Skin Sensitizer: Category 1A.
Carcinogenicity: Category 2
Reproductive Toxicity: Category 1B

Specific Target Organ Toxicity (repeated exposure): Category 1
Chronic Aquatic Toxicity: Category 2

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Corrosion |Exclamation mark |Health Hazard |Environment |

Pictograms

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure: respiratory system.
H373	May cause damage to organs through prolonged or repeated exposure: gastrointestinal tract | immune system | skin.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	45 - 55
Urethane acrylate oligomer	72162-39-1	30 - 40
Curing agent	Trade Secret	20 - 25
Amine modified acrylic oligomer	67906-98-3	< 10
1,6-hexanediol diacrylate	13048-33-4	< 7
2-Ethylhexyl acrylate	103-11-7	< 7
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	< 6
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	< 4
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	193098-40-7	< 4
Tetrahydrofurfuryl acrylate	2399-48-6	< 4
2-Phenoxyethyl acrylate	48145-04-6	< 2
Poly(dimethylsiloxane)	63148-62-9	< 2
Triazine Derivative	Trade Secret	< 2
UV Absorbers	Trade Secret	< 2
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	< 1
Acrylic acid	79-10-7	< 0.5
Toluene	108-88-3	< 0.5
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	None	< 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.
A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

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

The most important symptoms and effects based on the CLP classification include:

4.3. Indication of any immediate medical attention and special treatment required
Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

5.4. Hazchem code: -3Z

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with detergent and water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

Refer to Section 15 - Controls for more information

7.1. Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use

personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from sunlight. Store away from heat. Store away from oxidising agents.

7.3. Certified handler
Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcinogen, Ototoxicant
Toluene	108-88-3	New Zealand WES	TWA(8 hours):75 mg/m3(20 ppm);STEL(15 minutes):377 mg/m3(100 ppm)	Skin
1,6-hexanediol diacrylate	13048-33-4	AIHA	TWA:1 mg/m3(0.11 ppm)	Dermal Sensitizer
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Manufacturer determined	TWA(8 hours):0.1 ppm(0.57 mg/m3)	
Tetrahydrofurfuryl acrylate	2399-48-6	Manufacturer determined	TWA:0.1 ppm(0.64 mg/m3);STEL:0.3 ppm(1.91 mg/m3)	Dermal Sensitizer
Acrylic acid	79-10-7	ACGIH	TWA:2 ppm	A4: Not class. as human carcin, Danger of cutaneous absorption
Acrylic acid	79-10-7	New Zealand WES	TWA(8 hours):5.9 mg/m3(2 ppm)	Dermal sensitizer, SKIN

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
New Zealand WES : New Zealand Workplace Exposure Standards.
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m^3: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Full face shield.
Indirect vented goggles.

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates, including oily mists

For questions about suitability for a specific application, consult with your respirator manufacturer.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless
Odour	Acrylate
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	>=93.3 ºC
Flash point	>=93.3 ºC [*Test Method:*Closed Cup]
Evaporation rate	<=1 [*Ref Std:*BUOAC=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	<=1,333.2 Pa [@ 20 ºC]
Vapor Density and/or Relative Vapor Density	>=1 [*Ref Std:*AIR=1]
Density	1.3 g/ml
Relative density	1.3 [*Test Method:*Tested per ASTM protocol] [*Ref Std:*WATER=1]
Water solubility	Moderate
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	1,000 - 5,000 Pa-s [*Test Method:*Tested per ASTM protocol]

Volatile organic compounds (VOC)	< 10 g/l
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	< 10 g/l
Molecular weight	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation may occur. upon depletion of inhibitor or exposure to heat.

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact
Harmful in contact with skin. Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

Eye contact
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion
Harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Immunological effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and/or respiratory reaction, and changes in immune function. Gastrointestinal Effects: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure. Dermal effects: Signs/symptoms may include redness, itching, acne, or bumps on the skin.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >1,000 - =2,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
1-vinylhexahydro-2H-azepin-2-one	Dermal	Rabbit	LD50 1,700 mg/kg
1-vinylhexahydro-2H-azepin-2-one	Ingestion	Rat	LD50 1,049 mg/kg
Curing agent	Dermal	Rat	LD50 > 5,000 mg/kg
Curing agent	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1 mg/l
Curing agent	Ingestion	Rat	LD50 2,500 mg/kg
2-Ethylhexyl acrylate	Dermal	Rabbit	LD50 > 10,000 mg/kg
2-Ethylhexyl acrylate	Ingestion	Rat	LD50 4,430 mg/kg
1,6-hexanediol diacrylate	Dermal	Rabbit	LD50 3,636 mg/kg
1,6-hexanediol diacrylate	Ingestion	Rat	LD50 > 5,000 mg/kg
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Tetrahydrofurfuryl acrylate	Ingestion	Rat	LD50 882 mg/kg
2-(2-Ethoxyethoxy)ethyl acrylate	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
2-(2-Ethoxyethoxy)ethyl acrylate	Ingestion	Rat	LD50 1,860 mg/kg
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Dermal	Rat	LD50 > 2,000 mg/kg
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Ingestion	Rat	LD50 >500, <2,000 mg/kg
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 2.8 mg/l
Triazine Derivative	Dermal	Rat	LD50 > 2,000 mg/kg

Triazine Derivative	Ingestion	Rat	LD50 > 2,000 mg/kg
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
2-Phenoxyethyl acrylate	Dermal	Rat	LD50 > 2,000 mg/kg
2-Phenoxyethyl acrylate	Ingestion	Rat	LD50 > 5,000 mg/kg
Bis(2,6-diisopropylphenyl)carbodiimide	Dermal	Rat	LD50 > 2,000 mg/kg
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Rat	LD50 >300, <2000 mg/kg
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	Dermal	similar compounds	LD50 > 5,000 mg/kg
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	Ingestion	similar compounds	LD50 > 2,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Acrylic acid	Dermal	Rabbit	LD50 > 2,000 mg/kg
Acrylic acid	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3.8 mg/l
Acrylic acid	Ingestion	Rat	LD50 1,250 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
1-vinylhexahydro-2H-azepin-2-one	Rabbit	Minimal irritation
Urethane acrylate oligomer	similar compounds	Irritant
Curing agent	Rabbit	No significant irritation
Amine modified acrylic oligomer	similar compounds	Irritant
2-Ethylhexyl acrylate	Rabbit	Irritant
1,6-hexanediol diacrylate	Rabbit	Irritant
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Rabbit	No significant irritation
Tetrahydrofurfuryl acrylate	Rabbit	Corrosive
2-(2-Ethoxyethoxy)ethyl acrylate	Rabbit	Irritant
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Rabbit	No significant irritation
Triazine Derivative	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation
2-Phenoxyethyl acrylate	Rabbit	No significant irritation
Bis(2,6-diisopropylphenyl)carbodiimide	Rat	Minimal irritation
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	similar compounds	No significant irritation
Toluene	Rabbit	Irritant
Acrylic acid	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
1-vinylhexahydro-2H-azepin-2-one	Rabbit	Severe irritant
Urethane acrylate oligomer	similar compounds	Severe irritant
Curing agent	Rabbit	Mild irritant
Amine modified acrylic oligomer	similar compounds	Severe irritant

2-Ethylhexyl acrylate	Rabbit	No significant irritation
1,6-hexanediol diacrylate	Rabbit	Moderate irritant
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Rabbit	No significant irritation
Tetrahydrofurfuryl acrylate	Rabbit	Corrosive
2-(2-Ethoxyethoxy)ethyl acrylate	Rabbit	Severe irritant
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Rabbit	Severe irritant
Triazine Derivative	Rabbit	No significant irritation
Poly(dimethylsiloxane)	Rabbit	No significant irritation
2-Phenoxyethyl acrylate	Rabbit	No significant irritation
Bis(2,6-diisopropylphenyl)carbodiimide	Rabbit	Mild irritant
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	similar compounds	No significant irritation
Toluene	Rabbit	Moderate irritant
Acrylic acid	Rabbit	Corrosive

Sensitisation:

Skin Sensitisation

Name	Species	Value
1-vinylhexahydro-2H-azepin-2-one	Mouse	Sensitising
Curing agent	Guinea pig	Not classified
Amine modified acrylic oligomer	similar compounds	Sensitising
2-Ethylhexyl acrylate	Human and animal	Sensitising
1,6-hexanediol diacrylate	Guinea pig	Sensitising
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Mouse	Sensitising
Tetrahydrofurfuryl acrylate	Professional judgement	Sensitising
2-(2-Ethoxyethoxy)ethyl acrylate	Guinea pig	Sensitising
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Guinea pig	Not classified
Triazine Derivative	Mouse	Not classified
2-Phenoxyethyl acrylate	Guinea pig	Sensitising
Bis(2,6-diisopropylphenyl)carbodiimide	Guinea pig	Not classified
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	similar compounds	Sensitising
Toluene	Guinea pig	Not classified
Acrylic acid	Guinea pig	Not classified

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
1-vinylhexahydro-2H-azepin-2-one	In Vitro	Not mutagenic
Curing agent	In Vitro	Not mutagenic
Curing agent	In vivo	Not mutagenic

2-Ethylhexyl acrylate	In vivo	Not mutagenic
2-Ethylhexyl acrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,6-hexanediol diacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	In Vitro	Not mutagenic
Tetrahydrofurfuryl acrylate	In Vitro	Not mutagenic
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	In Vitro	Not mutagenic
Triazine Derivative	In Vitro	Not mutagenic
Bis(2,6-diisopropylphenyl)carbodiimide	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Acrylic acid	In vivo	Not mutagenic
Acrylic acid	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
2-Ethylhexyl acrylate	Dermal	Mouse	Carcinogenic.
1,6-hexanediol diacrylate	Dermal	Mouse	Not carcinogenic
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Acrylic acid	Ingestion	Rat	Not carcinogenic
Acrylic acid	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Curing agent	Ingestion	Not classified for development	Rat	NOAEL 900 mg/kg/day	during gestation
2-Ethylhexyl acrylate	Inhalation	Not classified for development	Rat	NOAEL 0.75 mg/l	during gestation
1,6-hexanediol diacrylate	Not specified.	Not classified for development	Rat	NOAEL 750 mg/kg/day	during organogenesis
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Not classified for development	Rat	NOAEL 150 mg/kg/day	during gestation
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Toxic to female reproduction	Rat	NOAEL 200 mg/kg/day	premating into lactation
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	Toxic to male reproduction	Rat	NOAEL 60 mg/kg/day	85 days
Tetrahydrofurfuryl acrylate	Ingestion	Toxic to female reproduction	Rat	NOAEL 50 mg/kg/day	premating into lactation
Tetrahydrofurfuryl acrylate	Dermal	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	90 days
Tetrahydrofurfuryl acrylate	Ingestion	Toxic to male reproduction	Rat	NOAEL 35 mg/kg/day	90 days
Tetrahydrofurfuryl acrylate	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.6 mg/l	90 days
Tetrahydrofurfuryl acrylate	Ingestion	Toxic to development	Rat	NOAEL 50 mg/kg/day	premating into lactation
2-Phenoxyethyl acrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 800 mg/kg/day	43 days
2-Phenoxyethyl acrylate	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	premating into lactation
2-Phenoxyethyl acrylate	Ingestion	Toxic to development	Rat	NOAEL 300 mg/kg/day	premating into lactation
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Not classified for development	Rat	NOAEL 3	premating

				mg/kg/day	into lactation
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Not classified for male reproduction	Rat	NOAEL 3 mg/kg/day	28 days
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	Toxic to female reproduction	Rat	NOAEL 1 mg/kg/day	premating into lactation
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Acrylic acid	Ingestion	Not classified for female reproduction	Rat	NOAEL 460 mg/kg/day	2 generation
Acrylic acid	Ingestion	Not classified for male reproduction	Rat	NOAEL 460 mg/kg/day	2 generation
Acrylic acid	Inhalation	Not classified for development	Rat	NOAEL 1.1 mg/l	during organogenesis
Acrylic acid	Ingestion	Not classified for development	Rat	NOAEL 53 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
1-vinylhexahydro-2H-azepin-2-one	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	
Urethane acrylate oligomer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Amine modified acrylic oligomer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
2-Ethylhexyl acrylate	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	NOAEL Not available	
1,6-hexanediol diacrylate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Tetrahydrofurfuryl acrylate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Acrylic acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure

						Duration
1-vinylhexahydro-2H-azepin-2-one	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.001 mg/l	28 days
1-vinylhexahydro-2H-azepin-2-one	Inhalation	blood | liver | kidney and/or bladder | eyes	Not classified	Rat	NOAEL 0.18 mg/l	90 days
1-vinylhexahydro-2H-azepin-2-one	Ingestion	liver	Not classified	Rat	NOAEL 260 mg/kg/day	3 months
Curing agent	Ingestion	endocrine system | liver | kidney and/or bladder | heart | blood | immune system | nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
2-Ethylhexyl acrylate	Inhalation	endocrine system | liver	Not classified	Rat	NOAEL 0.75 mg/l	90 days
2-Ethylhexyl acrylate	Inhalation	olfactory system	Not classified	Rat	NOAEL 0.08 mg/l	90 days
2-Ethylhexyl acrylate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.75 mg/l	90 days
1,6-hexanediol diacrylate	Dermal	skin	May cause damage to organs though prolonged or repeated exposure	Mouse	LOAEL 70 mg/kg/day	80 weeks
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Ingestion	skin | blood | liver | kidney and/or bladder | nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	Ingestion	gastrointestinal tract | immune system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 15 mg/kg/day	28 days
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	heart | endocrine system | immune system | kidney and/or bladder	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 4 mg/kg/day	28 days
Bis(2,6-diisopropylphenyl)carbodiimide	Ingestion	bone, teeth, nails, and/or hair | hematopoietic system | liver | nervous system	Not classified	Rat	NOAEL 16 mg/kg/day	28 days
Toluene	Inhalation	auditory system | eyes | olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system | vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 625 mg/kg/day	13 weeks

			classification			
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver | kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity
Ecotoxic to the aquatic environment.
Acute Aquatic Toxicity: Category 2
Chronic Aquatic Toxicity: Category 2

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Bacteria	Experimental	17 hours	EC50	622 mg/l
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Green algae	Experimental	72 hours	ErC50	>100 mg/l
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Zebra Fish	Experimental	96 hours	LC50	307 mg/l
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Green algae	Experimental	72 hours	NOEC	25 mg/l

Urethane acrylate oligomer	72162-39-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Curing agent	Trade Secret	Activated sludge	Experimental	3 hours	EC10	>100 mg/l
Curing agent	Trade Secret	Green algae	Experimental	72 hours	ErC50	14.4 mg/l
Curing agent	Trade Secret	Water flea	Experimental	48 hours	EC50	53.9 mg/l
Curing agent	Trade Secret	Zebra Fish	Experimental	96 hours	LC50	24 mg/l
Curing agent	Trade Secret	Green algae	Experimental	72 hours	EC10	2.51 mg/l
Amine modified acrylic oligomer	67906-98-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
1,6-hexanediol diacrylate	13048-33-4	Green algae	Experimental	72 hours	EC50	2.33 mg/l
1,6-hexanediol diacrylate	13048-33-4	Medaka	Experimental	96 hours	LC50	0.38 mg/l
1,6-hexanediol diacrylate	13048-33-4	Water flea	Experimental	48 hours	EC50	2.7 mg/l
1,6-hexanediol diacrylate	13048-33-4	Green algae	Experimental	72 hours	NOEC	0.9 mg/l
1,6-hexanediol diacrylate	13048-33-4	Medaka	Experimental	39 days	NOEC	0.072 mg/l
1,6-hexanediol diacrylate	13048-33-4	Water flea	Experimental	21 days	NOEC	0.14 mg/l
1,6-hexanediol diacrylate	13048-33-4	Activated sludge	Experimental	30 minutes	EC50	270 mg/l
2-Ethylhexyl acrylate	103-11-7	Activated sludge	Experimental	30 minutes	EC20	>1,000 mg/l
2-Ethylhexyl acrylate	103-11-7	Green algae	Experimental	72 hours	EC50	1.71 mg/l
2-Ethylhexyl acrylate	103-11-7	Rainbow trout	Experimental	96 hours	LC50	1.81 mg/l
2-Ethylhexyl acrylate	103-11-7	Water flea	Experimental	48 hours	EC50	1.3 mg/l
2-Ethylhexyl acrylate	103-11-7	Water flea	Estimated	21 days	NOEC	0.136 mg/l
2-Ethylhexyl acrylate	103-11-7	Green algae	Experimental	72 hours	NOEC	0.45 mg/l
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Activated sludge	Experimental	3 hours	EC20	>1,000 mg/l
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Common Carp	Experimental	96 hours	LC50	1.4 mg/l
Diphenyl(2,4,6-trimethylbenzoyl)phosphine	75980-60-8	Green algae	Experimental	72 hours	EC50	>2.01 mg/l

oxide						
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Water flea	Experimental	48 hours	EC50	3.53 mg/l
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Green algae	Experimental	72 hours	EC10	1.56 mg/l
2-(2-Ethoxyethoxy) ethyl acrylate	7328-17-8	Activated sludge	Experimental	3 hours	EC50	770 mg/l
2-(2-Ethoxyethoxy) ethyl acrylate	7328-17-8	Golden Orfe	Experimental	96 hours	LC50	10 mg/l
2-(2-Ethoxyethoxy) ethyl acrylate	7328-17-8	Green algae	Experimental	72 hours	EC50	3.2 mg/l
2-(2-Ethoxyethoxy) ethyl acrylate	7328-17-8	Water flea	Experimental	48 hours	EC50	10.56 mg/l
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	193098-40-7	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	193098-40-7	Green algae	Experimental	72 hours	EC50	>0.15 mg/l
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine,	193098-40-7	Rainbow trout	Experimental	96 hours	LC50	>1.5 mg/l

polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated						
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	193098-40-7	Water flea	Experimental	48 hours	EC50	0.64 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Activated sludge	Experimental	3 hours	EC50	263.7 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Green algae	Experimental	72 hours	EC50	3.92 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Water flea	Experimental	48 hours	EC50	37.7 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Zebra Fish	Experimental	96 hours	LC50	7.32 mg/l
Tetrahydrofurfuryl acrylate	2399-48-6	Green algae	Experimental	72 hours	EC10	2.48 mg/l
2-Phenoxyethyl acrylate	48145-04-6	Activated sludge	Experimental	3 hours	EC50	177 mg/l
2-Phenoxyethyl acrylate	48145-04-6	Golden Orfe	Experimental	96 hours	LC50	10 mg/l
2-Phenoxyethyl acrylate	48145-04-6	Green algae	Experimental	72 hours	EC50	4.4 mg/l
2-Phenoxyethyl acrylate	48145-04-6	Water flea	Experimental	48 hours	EC50	1.21 mg/l
2-Phenoxyethyl acrylate	48145-04-6	Green algae	Experimental	72 hours	EC10	0.71 mg/l
Poly(dimethylsiloxane)	63148-62-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Triazine Derivative	Trade Secret	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Triazine Derivative	Trade Secret	Green algae	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Triazine Derivative	Trade Secret	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Triazine Derivative	Trade Secret	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Triazine Derivative	Trade Secret	Green algae	Experimental	96 hours	No tox obs at lmt of water sol	100 mg/l
UV	Trade Secret	Green algae	Experimental	72 hours	No tox obs at	>100 mg/l

ABSORBERS					lmt of water sol	
UV ABSORBERS	Trade Secret	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
UV ABSORBERS	Trade Secret	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
UV ABSORBERS	Trade Secret	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
UV ABSORBERS	Trade Secret	Rainbow trout	Experimental	96 days	No tox obs at lmt of water sol	>100 mg/l
UV ABSORBERS	Trade Secret	Water flea	Experimental	21 days	No tox obs at lmt of water sol	>100 mg/l
UV ABSORBERS	Trade Secret	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Acrylic acid	79-10-7	Green algae	Experimental	72 hours	EC50	0.13 mg/l
Acrylic acid	79-10-7	Rainbow trout	Experimental	96 hours	LC50	27 mg/l
Acrylic acid	79-10-7	Water flea	Experimental	48 hours	EC50	95 mg/l
Acrylic acid	79-10-7	Green algae	Experimental	72 hours	EC10	0.03 mg/l
Acrylic acid	79-10-7	Water flea	Experimental	21 days	NOEC	3.8 mg/l
Acrylic acid	79-10-7	N/A	Experimental	7 days	LD50	>=98 mg per kg of bodyweight
Acrylic acid	79-10-7	N/A	Experimental	48 hours	NOEC	0.9 mg/l
Acrylic acid	79-10-7	Activated sludge	Experimental	30 minutes	NOEC	100 mg/l
Acrylic acid	79-10-7	Redworm	Experimental	14 days	LC50	>1,000 mg/kg (Dry Weight)
Acrylic acid	79-10-7	Soil microbes	Experimental	28 days	NOEC	100 mg/kg (Dry Weight)
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-	None	Water flea	Experimental	48 hours	EC50	>100 mg/l

oxo-2-propenyl)oxy]propoxy]propyl Me						
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Toluene	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9.5 mg/l
Toluene	108-88-3	Green algae	Experimental	72 hours	EC50	12.5 mg/l
Toluene	108-88-3	Leopard frog	Experimental	9 days	LC50	0.39 mg/l
Toluene	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6.41 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1.39 mg/l
Toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
Toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
Toluene	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
Toluene	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
Toluene	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
Toluene	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
Toluene	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	30-40 % removal of DOC	OECD 301A - DOC Die Away Test
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Experimental Biodegradation		Dissolv. Organic Carbon Deplet	98 % removal of DOC	OECD 302B Zahn-Wellens/EVPA
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Experimental Hydrolysis		Hydrolytic half-life acidic pH	6.5 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Urethane acrylate oligomer	72162-39-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Curing agent	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	≥73 %CO2 evolution/THCO2 evolution	similar to EC C.4.C Biodeg
Amine modified acrylic oligomer	67906-98-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
1,6-hexanediol diacrylate	13048-33-4	Experimental Biodegradation	28 days	CO2 evolution	60-70 %CO2 evolution/THCO2 evolution	ISO 14593 Inorg C Headspace

1,6-hexanediol diacrylate	13048-33-4	Estimated Photolysis		Photolytic half-life (in air)	1 days (t 1/2)	Episuite™
2-Ethylhexyl acrylate	103-11-7	Experimental Biodegradation	28 days	BOD	70-80 %BOD/ThOD	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Experimental Biodegradation	28 days	BOD	≤10 %BOD/ThOD	OECD 301F - Manometric respirometry
2-(2-Ethoxyethoxy) ethyl acrylate	7328-17-8	Experimental Biodegradation	28 days	CO2 evolution	98 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	193098-40-7	Experimental Biodegradation	29 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Tetrahydrofurfuryl acrylate	2399-48-6	Experimental Biodegradation	28 days	BOD	77.7 %BOD/ThOD	OECD 301F - Manometric respirometry
Tetrahydrofurfuryl acrylate	2399-48-6	Experimental Bioconcentration		Log Kow	0.81	
2-Phenoxyethyl acrylate	48145-04-6	Experimental Biodegradation	28 days	BOD	22.3 %BOD/ThOD	OECD 301D - Closed bottle test
2-Phenoxyethyl acrylate	48145-04-6	Estimated Photolysis		Photolytic half-life (in air)	9.7 hours (t 1/2)	
Poly(dimethylsiloxane)	63148-62-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Triazine Derivative	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	4 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
UV ABSORBERS	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	2 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Experimental Biodegradation	28 days	BOD	1 %BOD/ThOD	
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Experimental Hydrolysis		Hydrolytic half-life	14.96 days (t 1/2)	
Acrylic acid	79-10-7	Experimental Biodegradation	28 days	Percent degraded	81 %BOD/ThOD	OECD 301D - Closed bottle test

Acrylic acid	79-10-7	Estimated Photolysis		Photolytic half-life (in air)	3.2 days (t 1/2)	
Acrylic acid	79-10-7	Experimental Biodegradation	3 days	Percent degraded	72.9 %CO2 evolution/THCO2 evolution	
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	None	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
1-vinylhexahydro-2H-azepin-2-one	2235-00-9	Experimental Bioconcentration		Log Kow	1.2	similar to OECD 107
Urethane acrylate oligomer	72162-39-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Curing agent	Trade Secret	Experimental BCF - Fish	56 days	Bioaccumulation factor	4-12	OECD305-Bioconcentration
Curing agent	Trade Secret	Experimental Bioconcentration		Log Kow	2.81	OECD 107 log Kow shke flsk mtd
Amine modified acrylic oligomer	67906-98-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,6-hexanediol diacrylate	13048-33-4	Experimental Bioconcentration		Log Kow	2.81	
2-Ethylhexyl acrylate	103-11-7	Estimated Bioconcentration		Bioaccumulation factor	270	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Experimental BCF - Fish	56 days	Bioaccumulation factor	≤40	
2-(2-Ethoxyethoxy) ethyl acrylate	7328-17-8	Experimental Bioconcentration		Log Kow	1.105	

N,N'-Bis(2,2,6,6-tetramethyl-4-piperidinyl)-1,6-hexanediamine, polymers with morpholine-2,4,6-trichloro-1,3,5-triazine reaction products, methylated	193098-40-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-Phenoxyethyl acrylate	48145-04-6	Experimental Bioconcentration		Log Kow	2.58	
Poly(dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Triazine Derivative	Trade Secret	Experimental BCF - Fish	28 days	Bioaccumulation factor	29	OECD305-Bioconcentration
Triazine Derivative	Trade Secret	Experimental Bioconcentration		Log Kow	>6	OECD 107 log Kow shke flsk mtd
UV ABSORBERS	Trade Secret	Experimental BCF - Fish	28 days	Bioaccumulation factor	<4	OECD305-Bioconcentration
UV ABSORBERS	Trade Secret	Estimated Bioconcentration		Log Kow	7.6	Episuite™
Bis(2,6-diisopropylphenyl)carbodiimide	2162-74-5	Estimated Bioconcentration		Bioaccumulation factor	13	
Acrylic acid	79-10-7	Experimental Bioconcentration		Log Kow	0.46	OECD 107 log Kow shke flsk mtd
Siloxanes and Silicones, 3-[3-(acetyloxy)-2-hydroxypropoxy]propyl Me, di-Me, 3-[2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propoxy]propyl Me	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport
UN No.: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (Tetrahydrofurfuryl Acrylate; 2-Phenoxyethyl Acrylate)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Not restricted, environmentally hazardous substance exception.
Hazchem Code: -3Z
IERG: 47

International Air Transport Association (IATA) - Air Transport
UN No.: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (Tetrahydrofurfuryl Acrylate; 2-Phenoxyethyl Acrylate)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Not restricted, as per Special Provision A197, environmentally hazardous substance exception.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (Tetrahydrofurfuryl Acrylate; 2-Phenoxyethyl Acrylate)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Not restricted, as per IMDG code 2.10.2.7, marine pollutant exception.

SECTION 15: Regulatory information

HSNO Approval number	HSR002679
Group standard name	Surface Coatings and Colourants (Carcinogenic) Group Standard 2020
HSNO Hazard classification	Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status
All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

Controls in accordance with The Health and Safety at Work Act 2015, Health and Safety at Work (Hazardous Substances) Regulations 2017 and the HSNO Act 1996, Hazardous Substances (Hazardous Property Controls) Notice 2017

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for all other substances)
Secondary containment	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for all other substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Serious eye damage Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for Acute toxicity Category 4 or Hazardous to the aquatic environment Category 4 substances)

SECTION 16: Other information

Revision information:
Complete document review.

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Key to abbreviations and acronyms
GHS refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017
HSNO means Hazardous Substances and New Organisms Act 1996

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