Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier
3M™ Screen Printable Pressure Sensitive Adhesive SP7202

Product Identification Numbers
70-0075-4504-2

7100238539

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

Identified uses
Adhesive

1.3. Details of the supplier of the safety data sheet
Address: 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@mmm.com
Website: www.3M.com

1.4. Emergency telephone number
Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Skin Sensitization, Category 1 - Skin Sens. 1; H317
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
WARNING.

Symbols
GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	227-561-6	20 - 30
2-ethylhexyl acrylate	103-11-7	203-080-7	< 20
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	239-263-3	1 - 5
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5	1 - 5
acrylic acid, monoester with propane-1,2-diol	25584-83-2	247-118-0	< 0.1
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate		915-687-0	1(Typically1)

HAZARD STATEMENTS:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P261A	Avoid breathing vapours.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

47% of the mixture consists of components of unknown acute oral toxicity.

Contains 53% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-Propenoic acid, 2-ethylhexyl ester, polymer with 1,2-propanediol mono-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, N-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]carbamate	Trade Secret	40 - 50	Substance not classified as hazardous
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	(CAS-No.) 5888-33-5 (EC-No.) 227-561-6	20 - 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 Skin Sens. 1B, H317
2-ethylhexyl acrylate	(CAS-No.) 103-11-7 (EC-No.) 203-080-7	< 20	Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335 Nota D Aquatic Chronic 3, H412
Silane, dichlorodimethyl-, reaction products with silica	Trade Secret	5 - 15	Substance not classified as hazardous
Benzeneacetic acid, .alpha.-oxo-, methyl ester	(CAS-No.) 15206-55-0 (EC-No.) 239-263-3	1 - 5	Skin Sens. 1, H317
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	(CAS-No.) 162881-26-7 (EC-No.) ELINCS 423-340-5	1 - 5	Skin Sens. 1A, H317 Aquatic Chronic 4, H413
acrylic acid, monoester with propane-1,2-diol	(CAS-No.) 25584-83-2 (EC-No.) 247-118-0	< 0.1	Acute Tox. 2, H310 Acute Tox. 3, H331 Acute Tox. 3, H301 Skin Corr. 1B, H314 Skin Sens. 1, H317 Nota C,D Aquatic Chronic 3, H412
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl	(EC-No.) 915-687-0	1 (Typically 1)	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 Skin Sens. 1A, H317

sebacate			Repr. 2, H361f

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.
Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
acrylic acid, monoester with propane-1,2-diol	(CAS-No.) 25584-83-2 (EC-No.) 247-118-0	(C >= 0.2%) Skin Sens. 1, H317
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	(CAS-No.) 5888-33-5 (EC-No.) 227-561-6	(C >= 10%) STOT SE 3, H335

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

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:
Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

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

SECTION 5: Fire-fighting measures

5.1. 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
Amine compounds.	During combustion.
Isocyanates	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Toxic vapour, gas, particulate.	During combustion.

5.3. Advice 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.

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 vapours, 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 an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Avoid breathing 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. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

Biological limit values
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

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:
Safety glasses with side shields.

Applicable Norms/Standards
Use eye protection conforming to EN 166

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:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards
Use gloves tested to EN 374

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 vapours and particulates

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

Applicable Norms/Standards
Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous.
Colour	Colourless
Odor	Acrylate
Odour threshold	*No data available.*
Melting point/freezing point	*Not applicable.*
Boiling point/boiling range	148.9 ºC
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Flash point	> 93.3 ºC [@ 101,325 Pa] [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	*No data available.*
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	666.6 Pa [@ 18.3 ºC]
Density	0.9 g/ml
Relative density	0.9 [*Ref Std:*WATER=1]
Relative Vapor Density	*No data available.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*No data available.*
Molecular weight	*Not applicable.*

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 will not occur.

10.4 Conditions to avoid
Heat.
Light.

10.5 Incompatible materials
None known.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

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

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.

Skin contact
Skin Irritation: Signs/symptoms may include localised 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
No information available.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Additional Health Effects:

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

Additional information:
The health hazards of this material are not completely known. Conservative safe handling measures should be followed (as described in sections 7 and 8), and appropriate first aid measures (as described in section 4) should be taken if exposure occurs.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Rat	LD50 4,350 mg/kg
2-ethylhexyl acrylate	Dermal	Rabbit	LD50 > 10,000 mg/kg
2-ethylhexyl acrylate	Ingestion	Rat	LD50 4,430 mg/kg
Silane, dichlorodimethyl-, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silane, dichlorodimethyl-, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silane, dichlorodimethyl-, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Dermal	Rat	LD50 > 2,000 mg/kg

Benzeneacetic acid, .alpha.-oxo-, methyl ester	Ingestion	Rat	LD50 > 6,810 mg/kg
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Dermal	Rat	LD50 > 2,000 mg/kg
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Ingestion	Rat	LD50 > 2,000 mg/kg
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Rat	LD50 3,125 mg/kg
acrylic acid, monoester with propane-1,2-diol	Inhalation-Dust/Mist		LC50 estimated to be 0.5 - 1 mg/l
acrylic acid, monoester with propane-1,2-diol	Dermal	Rabbit	LD50 117 mg/kg
acrylic acid, monoester with propane-1,2-diol	Ingestion	Rat	LD50 820 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Rabbit	Minimal irritation
2-ethylhexyl acrylate	Rabbit	Irritant
Silane, dichlorodimethyl-, reaction products with silica	Rabbit	No significant irritation
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Rabbit	Mild irritant
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Rabbit	No significant irritation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Minimal irritation
acrylic acid, monoester with propane-1,2-diol	Not available	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Rabbit	Mild irritant
2-ethylhexyl acrylate	Rabbit	No significant irritation
Silane, dichlorodimethyl-, reaction products with silica	Rabbit	No significant irritation
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Rabbit	No significant irritation
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Rabbit	No significant irritation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Mouse	Sensitising
2-ethylhexyl acrylate	Human and animal	Sensitising
Silane, dichlorodimethyl-, reaction products with silica	Human and animal	Not classified
Benzeneacetic acid, .alpha.-oxo-, methyl ester	In vitro data	Sensitising
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Guinea pig	Sensitising
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Guinea pig	Sensitising
acrylic acid, monoester with propane-1,2-diol	Not available	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	In Vitro	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
Silane, dichlorodimethyl-, reaction products with silica	In Vitro	Not mutagenic
Benzeneacetic acid, .alpha.-oxo-, methyl ester	In Vitro	Not mutagenic
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	In Vitro	Not mutagenic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	In vivo	Not mutagenic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	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.
Silane, dichlorodimethyl-, reaction products with silica	Not specified.	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
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	31 days
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	premating into lactation
2-ethylhexyl acrylate	Inhalation	Not classified for development	Rat	NOAEL 0.75 mg/l	during gestation
Silane, dichlorodimethyl-, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane, dichlorodimethyl-, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silane, dichlorodimethyl-, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,493 mg/kg/day	29 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for development	Rat	NOAEL 209 mg/kg/day	premating into lactation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Toxic to female reproduction	Rat	NOAEL 804 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2-ethylhexyl acrylate	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	NOAEL Not available	
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	Ingestion	gastrointestinal tract | immune system | kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | nervous system | respiratory system	Not classified	Rat	NOAEL 500 mg/kg/day	31 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
Silane, dichlorodimethyl-, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Benzeneacetic acid, .alpha.-oxo-, methyl ester	Ingestion	heart | kidney and/or bladder | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | muscles | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	28 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	gastrointestinal tract | liver | immune system | heart | endocrine system | hematopoietic system | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days

Aspiration Hazard

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

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.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
2-Propenoic acid, 2-ethylhexyl ester, polymer with 1,2-propanediol mono-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, N-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]carbamate	Trade Secret		Data not available or insufficient for classification			N/A
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Green algae	Experimental	72 hours	EC50	1.98 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Zebra Fish	Experimental	96 hours	LC50	0.704 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Green Algae	Experimental	72 hours	NOEC	0.405 mg/l
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Water flea	Experimental	21 days	NOEC	0.092 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
Silane, dichlorodimethyl-, reaction products with silica	Trade Secret		Data not available or insufficient for classification			N/A
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	Activated sludge	Experimental	3 hours	EC10	390 mg/l
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	Green Algae	Experimental	72 hours	EC50	68.6 mg/l
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	Water flea	Experimental	48 hours	EC50	>39.6 mg/l
Benzeneacetic acid, .alpha.-oxo-,	15206-55-0	Zebra Fish	Experimental	96 hours	LC50	>54.6 mg/l

methyl ester						
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	Green Algae	Experimental	72 hours	EC10	39.4 mg/l
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	Green algae	Experimental	72 hours	EC50	>100 mg/l
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	Green algae	Experimental	72 hours	NOEC	>100 mg/l
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Fathead minnow	Experimental	96 hours	LC50	3.1 mg/l
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Green algae	Experimental	72 hours	EC50	6.98 mg/l
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Water flea	Experimental	48 hours	EC50	24 mg/l
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Water flea	Estimated	21 days	NOEC	0.48 mg/l
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Green algae	Experimental	72 hours	NOEC	0.625 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Activated sludge	Experimental	3 hours	IC50	>=100 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Green algae	Experimental	72 hours	EC50	1.68 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Zebra Fish	Experimental	96 hours	LC50	0.9 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Green algae	Experimental	72 hours	NOEC	0.22 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Water flea	Experimental	21 days	NOEC	1 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2-Propenoic acid, 2-ethylhexyl ester, polymer with 1,2-propanediol mono-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, N-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]carbamate	Trade Secret	Data not availbl-insufficient			N/A	
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Experimental Biodegradation	28 days	CO2 evolution	57 % weight	OECD 310 CO2 Headspace
2-ethylhexyl acrylate	103-11-7	Experimental Biodegradation	28 days	BOD	70-80 % BOD/ThBOD	Non-standard method
Silane, dichlorodimethyl-, reaction products with silica	Trade Secret	Data not availbl-insufficient			n/a	
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	Experimental Hydrolysis		Hydrolytic half-life	3.2 hours (t 1/2)	Non-standard method
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	Experimental Biodegradation	28 days	CO2 evolution	90-100 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	Experimental Biodegradation	28 days	CO2 evolution	1 % weight	OECD 301B - Modified sturm or CO2
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Experimental Biodegradation	14 days	Dissolv. Organic Carbon Deplet	90-100 % weight	OECD 301A - DOC Die Away Test
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	38 % weight	OECD 301E - Modif. OECD Screen

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
2-Propenoic acid, 2-ethylhexyl ester, polymer with 1,2-propanediol mono-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, N-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]carbamate	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Estimated BCF - Other	56 hours	Bioaccumulation factor	37	OECD 305E - Bioaccumulation flow-through fish test
2-ethylhexyl acrylate	103-11-7	Estimated Bioconcentration		Bioaccumulation factor	270	Estimated: Bioconcentration factor
Silane, dichlorodimethyl-, reaction products with silica	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Benzeneacetic acid, .alpha.-oxo-, methyl ester	15206-55-0	Experimental Bioconcentration		Log Kow	1.9	Non-standard method
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	Experimental BCF-Carp	28 days	Bioaccumulation factor	<5	OECD 305E - Bioaccumulation flow-through fish test
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Experimental Bioconcentration		Log Kow	0.2	Non-standard method
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-	915-687-0	Estimated BCF-Carp	56 days	Bioaccumulation factor	31.4	

pentamethyl-4-piperidyl sebacate						

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Estimated Mobility in Soil	Koc	1.5 l/kg	Episuite™
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Estimated Mobility in Soil	Koc	200,000 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)
08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN3082	UN3082	UN3082

14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(ISOBORNYL ACRYLATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(ISOBORNYL ACRYLATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(ISOBORNYL ACRYLATE)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Not Environmentally Hazardous	Not applicable	Not a Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M6	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
2-ethylhexyl acrylate	103-11-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Global inventory status

Contact 3M for more information. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E2 Hazardous to the Aquatic environment	200	500

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
2-ethylhexyl acrylate	103-11-7	200	500
acrylic acid, monoester with propane-1,2-diol	25584-83-2	50	200
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	200	500

15.2. Chemical Safety Assessment
A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Revision information:
No revision information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

3M Ireland MSDSs are available at www.3M.com