Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006) as amended by Regulation (EU) 2020/878

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

1.1. Product identifier
3M™ Process Color 884i v2 Yellow

Product Identification Numbers
75-0002-1718-4

7100324753

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

Identified uses
Ink

1.3. Details of the supplier of the safety data sheet
Address: 3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2
Telephone: +353 1 280 3555
E Mail: ner-productstewardship@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:
Flammable Liquid, Category 3 - Flam. Liq. 3; H226

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1 - Skin Sens. 1; H317
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
DANGER.

Symbols
GHS02 (Flame) |GHS05 (Corrosion) |GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
cyclohexanone	108-94-1	203-631-1	< 10
n-butyl methacrylate	97-88-1	202-615-1	< 0.3
2,3-Epoxypropyl neodecanoate	26761-45-5	247-979-2	< 0.2

HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280B	Wear protective gloves and eye/face protection.

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.
P310	Immediately call a POISON CENTRE or doctor/physician.

16% of the mixture consists of components of unknown acute oral toxicity.
16% of the mixture consists of components of unknown acute dermal toxicity.
58% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 16% 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]
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	(CAS-No.) 88917-22-0	30 - 60	Substance not classified as hazardous
Acrylic polymers	Trade Secret	10 - 30	Substance not classified as hazardous
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	(CAS-No.) 28262-63-7	10 - 30	Substance not classified as hazardous
cyclohexanone	(CAS-No.) 108-94-1 (EC-No.) 203-631-1	< 10	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
2-methoxy-1-methylethyl acetate	(CAS-No.) 108-65-6 (EC-No.) 203-603-9	< 10	Flam. Liq. 3, H226 STOT SE 3, H336
Polymer	Trade Secret	1 - 5	Substance not classified as hazardous
Acid	Trade Secret	1 - 5	Substance not classified as hazardous
xylene	(CAS-No.) 1330-20-7 (EC-No.) 215-535-7	< 1.5	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Skin Irrit. 2, H315 Nota C Asp. Tox. 1, H304 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 3, H412
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) - 2,5-PYRROLIDINEDIONE	(CAS-No.) 79720-19-7 (EC-No.) 279-242-6	< 1	Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10
n-butyl methacrylate	(CAS-No.) 97-88-1 (EC-No.) 202-615-1	< 0.3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT SE 3, H335 Nota D
2,3-Epoxypropyl neodecanoate	(CAS-No.) 26761-45-5 (EC-No.) 247-979-2	< 0.2	Skin Sens. 1A, H317 Muta. 2, H341 Repr. 2, H361d

			Aquatic Chronic 2, H411
toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9	< 0.2	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Aquatic Chronic 3, H412

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
2,3-Epoxypropyl neodecanoate	(CAS-No.) 26761-45-5 (EC-No.) 247-979-2	(C >= 0.001%) Skin Sens. 1A, H317

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
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.

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:
Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of 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 flammable liquids such as dry chemical or carbon dioxide 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
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

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. Cover spill area with a fire extinguishing foam that is resistant to polar solvents. 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 using non-sparking tools. Place in a metal 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
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators…) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

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

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
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
2-methoxy-1-methylethyl acetate	108-65-6	Ireland OELs	TWA(8 hours):275 mg/m3(50 ppm);STEL(15 minutes):550 mg/m3(100 ppm)	SKIN
toluene	108-88-3	Ireland OELs	TWA(8 hours):192 mg/m3(50 ppm);STEL(15 minutes):384 mg/m3(100 ppm)	SKIN
cyclohexanone	108-94-1	Ireland OELs	TWA(8 hours):40.8 mg/m3(10 ppm);STEL(15 minutes):81.6 mg/m3(20 ppm)	SKIN
xylene	1330-20-7	Ireland OELs	TWA(8 hours):221 mg/m3(50 ppm);STEL(15 minutes):442 mg/m3(100 ppm)	SKIN

Ireland OELs : Ireland. OELs
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
2-methoxy-1-methylethyl acetate		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	796 mg/kg bw/d
2-methoxy-1-methylethyl acetate		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	275 mg/m³
2-methoxy-1-methylethyl acetate		Worker	Inhalation, Short-term exposure, Local effects	550 mg/m³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation	Compartment	PNEC

	Product		
2-methoxy-1-methylethyl acetate		Agricultural soil	0.29 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Freshwater	0.635 mg/l
2-methoxy-1-methylethyl acetate		Freshwater sediments	3.29 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Intermittent releases to water	6.35 mg/l
2-methoxy-1-methylethyl acetate		Marine Water	0.0635 mg/l
2-methoxy-1-methylethyl acetate		Marine water sediments	0.329 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Sewage Treatment Plant	100 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

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. Use explosion-proof ventilation 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.

Applicable Norms/Standards
Use eye/face protection conforming to EN 16321

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 (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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
Half facepiece or full facepiece supplied-air respirator

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
Use a respirator conforming to EN 140 or EN 136: filter type A

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Liquid.
Colour	Yellow
Odor	Slight Solvent
Odour threshold	*No data available.*
Melting point/freezing point	*Not applicable.*
Boiling point/boiling range	>=140 ºC
Flammability	Flammable liquid: Category 3.
Flammable Limits(LEL)	1.1 % volume
Flammable Limits(UEL)	8.6 % volume
Flash point	42.2 ºC [*Test Method:*Tagliabue closed cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture reacts with water*
Kinematic Viscosity	1,158 mm²/sec
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	<=3.7 mm Hg [@ 20 ºC]
Density	0.95 g/ml
Relative density	0.95 [*Ref Std:*WATER=1]
Relative Vapour Density	*No data available.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	<=0.4 [*Ref Std:*BUOAC=1]
Molecular weight	*Not applicable.*
Percent volatile	65 - 75 %

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
Sparks and/or flames.

10.5 Incompatible materials
Strong acids.
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 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. May cause additional health effects (see below).

Skin contact
Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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

Additional Health Effects:

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 >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
2-methoxy-1-methylethyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-methoxy-1-methylethyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 > 28.8 mg/l
2-methoxy-1-methylethyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
cyclohexanone	Dermal	Rabbit	LD50 >794, <3160 mg/kg
cyclohexanone	Inhalation-Vapour (4 hours)	Rat	LC50 > 6.2 mg/l
cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
Acid	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.04 mg/l
Acid	Ingestion	Rat	LD50 > 5,000 mg/kg
Acid	Dermal	similar compounds	LD50 > 2,500 mg/kg
Polymer	Dermal	Rabbit	LD50 > 8,000 mg/kg
Polymer	Ingestion	Rat	LD50 > 8,000 mg/kg
xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
xylene	Inhalation-Vapour (4 hours)	Rat	LC50 29 mg/l
xylene	Ingestion	Rat	LD50 3,523 mg/kg
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) - 2,5-PYRROLIDINEDIONE	Dermal	Rabbit	LD50 > 2,000 mg/kg
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) - 2,5-PYRROLIDINEDIONE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5 mg/l
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) - 2,5-PYRROLIDINEDIONE	Ingestion	Rat	LD50 > 2,000 mg/kg
n-butyl methacrylate	Dermal	Rabbit	LD50 > 2,000 mg/kg
n-butyl methacrylate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 27 mg/l
n-butyl methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg

2,3-Epoxypropyl neodecanoate	Dermal	Rat	LD50 > 2,000 mg/kg
2,3-Epoxypropyl neodecanoate	Ingestion	Rat	LD50 > 2,000 mg/kg
toluene	Dermal	Rat	LD50 12,000 mg/kg
toluene	Inhalation-Vapour (4 hours)	Rat	LC50 30 mg/l
toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Rabbit	No significant irritation
2-methoxy-1-methylethyl acetate	Rabbit	No significant irritation
cyclohexanone	Rabbit	Irritant
Acid	In vitro data	No significant irritation
Polymer	Professional judgement	No significant irritation
xylene	Rabbit	Mild irritant
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	Rabbit	Corrosive
n-butyl methacrylate	Rabbit	Irritant
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
toluene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Rabbit	No significant irritation
2-methoxy-1-methylethyl acetate	Rabbit	Mild irritant
cyclohexanone	In vitro data	Corrosive
Acid	In vitro data	No significant irritation
Polymer	Professional judgement	No significant irritation
xylene	Rabbit	Mild irritant
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	Rabbit	Corrosive
n-butyl methacrylate	Rabbit	Mild irritant
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
toluene	Rabbit	Moderate irritant

Skin Sensitisation

Name	Species	Value
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Guinea pig	Not classified
2-methoxy-1-methylethyl acetate	Guinea pig	Not classified
cyclohexanone	Guinea pig	Not classified
Acid	Human	Not classified
n-butyl methacrylate	Guinea pig	Sensitising
2,3-Epoxypropyl neodecanoate	Guinea pig	Sensitising
toluene	Guinea	Not classified

	pig	

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
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	In Vitro	Not mutagenic
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	In vivo	Not mutagenic
2-methoxy-1-methylethyl acetate	In Vitro	Not mutagenic
cyclohexanone	In Vitro	Not mutagenic
cyclohexanone	In vivo	Not mutagenic
Acid	In Vitro	Not mutagenic
Acid	In vivo	Not mutagenic
xylene	In Vitro	Not mutagenic
xylene	In vivo	Not mutagenic
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	In Vitro	Not mutagenic
n-butyl methacrylate	In Vitro	Not mutagenic
n-butyl methacrylate	In vivo	Not mutagenic
2,3-Epoxypropyl neodecanoate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In vivo	Mutagenic
toluene	In Vitro	Not mutagenic
toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
xylene	Dermal	Rat	Not carcinogenic
xylene	Ingestion	Multiple animal species	Not carcinogenic
xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
n-butyl methacrylate	Inhalation	Multiple animal species	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

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-methoxy-1-methylethyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis

cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
cyclohexanone	Ingestion	Not classified for development	Rabbit	NOAEL 500 mg/kg/day	during gestation
cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2.6 mg/l	during gestation
Acid	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Acid	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	29 days
Acid	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
n-butyl methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
n-butyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating & during gestation
n-butyl methacrylate	Ingestion	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during gestation
n-butyl methacrylate	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during gestation
2,3-Epoxypropyl neodecanoate	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	2 generation
2,3-Epoxypropyl neodecanoate	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	2 generation
2,3-Epoxypropyl neodecanoate	Ingestion	Toxic to development	Rat	NOAEL 50 mg/kg/day	2 generation
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

Lactation

Name	Route	Species	Value
xylene	Ingestion	Mouse	Not classified for effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2-methoxy-1-methylethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2-methoxy-1-methylethyl acetate	Ingestion	central nervous system depression	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	
cyclohexanone	Inhalation	central nervous	May cause drowsiness or	Guinea	LOAEL 16.1	6 hours

		system depression	dizziness	pig	mg/l	
cyclohexanone	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
n-butyl methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation		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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	Ingestion	liver | heart | endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
2-methoxy-1-methylethyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
2-methoxy-1-methylethyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
2-methoxy-1-methylethyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days
2-methoxy-1-methylethyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
cyclohexanone	Inhalation	liver | kidney and/or bladder | heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles |	Not classified	Rat	NOAEL 2.5 mg/l	13 weeks

		nervous system | eyes | respiratory system | vascular system				
cyclohexanone	Ingestion	hematopoietic system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 407 mg/kg/day	3 months
Acid	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.01 mg/l	5 days
Acid	Inhalation	heart | endocrine system | gastrointestinal tract | hematopoietic system | liver | immune system | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	5 days
Acid	Ingestion	heart | endocrine system | gastrointestinal tract | hematopoietic system | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
xylene	Inhalation	heart | endocrine system | gastrointestinal tract | hematopoietic system | muscles | kidney and/or bladder | respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
xylene	Ingestion	heart | skin | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
n-butyl methacrylate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 11 mg/l	28 days
n-butyl methacrylate	Inhalation	olfactory system	Not classified	Rat	NOAEL 1.8 mg/l	28 days
n-butyl methacrylate	Inhalation	heart | endocrine	Not classified	Rat	NOAEL 11	28 days

		system | hematopoietic system | liver | nervous system | respiratory system			mg/l	
n-butyl methacrylate	Ingestion	olfactory system	Not classified	Rat	NOAEL 60 mg/kg/day	90 days
n-butyl methacrylate	Ingestion	endocrine system | hematopoietic system | liver | nervous system | kidney and/or bladder | heart | immune system	Not classified	Rat	NOAEL 360 mg/kg/day	90 days
2,3-Epoxypropyl neodecanoate	Ingestion	endocrine system | hematopoietic system | liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
2,3-Epoxypropyl neodecanoate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 100 mg/kg/day	90 days
2,3-Epoxypropyl neodecanoate	Ingestion	heart | skin | gastrointestinal tract | bone, teeth, nails, and/or hair | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
toluene	Inhalation	auditory system | nervous system | eyes | olfactory system	Causes damage to organs through 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 classification	Rat	NOAEL 625 mg/kg/day	13 weeks
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

xylene	Aspiration hazard
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.

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
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Green algae	Experimental	72 hours	ErC50	>1,000 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Rainbow trout	Experimental	96 hours	LC50	111 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Water flea	Experimental	48 hours	LC50	1,090 mg/l
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
2-methoxy-1-methylethyl acetate	108-65-6	Activated sludge	Experimental	30 minutes	EC10	>1,000 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Green algae	Experimental	72 hours	ErC50	>1,000 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Rainbow trout	Experimental	96 hours	LC50	134 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	48 hours	EC50	370 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	21 days	NOEC	100 mg/l
cyclohexanone	108-94-1	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
cyclohexanone	108-94-1	Algae or other aquatic plants	Experimental	72 hours	ErC50	32.9 mg/l
cyclohexanone	108-94-1	Fathead minnow	Experimental	96 hours	LC50	527 mg/l
cyclohexanone	108-94-1	Water flea	Experimental	24 hours	EC50	800 mg/l

cyclohexanone	108-94-1	Algae or other aquatic plants	Experimental	72 hours	ErC10	3.56 mg/l
Acid	Trade Secret	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Acid	Trade Secret	Water flea	Analogous Compound	48 hours	No tox obs at lmt of water sol	>100 mg/l
Acid	Trade Secret	Zebra Fish	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Acid	Trade Secret	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Acid	Trade Secret	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
Acid	Trade Secret	Redworm	Experimental	14 days	LC50	>1,000 mg/kg (Dry Weight)
Polymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
xylene	1330-20-7	Green algae	Analogous Compound	73 hours	ErC50	4.36 mg/l
xylene	1330-20-7	Rainbow trout	Analogous Compound	96 hours	LC50	2.6 mg/l
xylene	1330-20-7	Water flea	Analogous Compound	48 hours	EC50	3.82 mg/l
xylene	1330-20-7	Green algae	Analogous Compound	73 hours	NOEC	0.44 mg/l
xylene	1330-20-7	Water flea	Analogous Compound	7 days	NOEC	0.96 mg/l
xylene	1330-20-7	Rainbow trout	Experimental	56 days	NOEC	1.3 mg/l
xylene	1330-20-7	Activated sludge	Analogous Compound	30 minutes	EC50	>198 mg/l
xylene	1330-20-7	Redworm	Experimental	56 days	NOEC	42.6 mg/kg (Dry Weight)
xylene	1330-20-7	Soil microbes	Experimental	28 days	EC50	>1,000 mg/kg (Dry Weight)
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Common Carp	Experimental	96 hours	LC50	0.097 mg/l
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Green algae	Experimental	72 hours	ErC50	0.374 mg/l
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Water flea	Experimental	48 hours	EC50	0.501 mg/l
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Green algae	Experimental	72 hours	ErC10	0.236 mg/l
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Activated sludge	Experimental	3 hours	EC50	58.9 mg/l
n-butyl methacrylate	97-88-1	Diatom	Experimental	96 hours	ErC50	>1,260 mg/l

n-butyl methacrylate	97-88-1	Green algae	Experimental	72 hours	ErC50	23 mg/l
n-butyl methacrylate	97-88-1	Medaka	Experimental	96 hours	LC50	5.57 mg/l
n-butyl methacrylate	97-88-1	Water flea	Experimental	48 hours	EC50	25.4 mg/l
n-butyl methacrylate	97-88-1	Diatom	Experimental	96 hours	NOEC	530 mg/l
n-butyl methacrylate	97-88-1	Green algae	Experimental	72 hours	NOEC	7.1 mg/l
n-butyl methacrylate	97-88-1	Water flea	Experimental	21 days	NOEC	1.1 mg/l
n-butyl methacrylate	97-88-1	Activated sludge	Experimental	3 hours	EC50	204 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Activated sludge	Experimental	3 hours	NOEC	500 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Green algae	Experimental	72 hours	ErC50	2.9 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Rainbow trout	Experimental	96 hours	LC50	5 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Water flea	Experimental	48 hours	EC50	4.8 mg/l
2,3-Epoxypropyl neodecanoate	26761-45-5	Green algae	Experimental	96 hours	NOEC	1 mg/l
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 Nbr	Test type	Duration	Study Type	Test result	Protocol
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Analogous Compound Biodegradation	28 days	Dissolv. Organic Carbon Deplet	90 %removal of DOC	OECD 301F - Manometric respirometry
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Biodegradation	28 days	BOD	87.2 %BOD/ThOD	OECD 301C - MITI test (I)

2-methoxy-1-methylethyl acetate	108-65-6	Experimental Aquatic Inherent Biodegrad.		Dissolv. Organic Carbon Deplet	>100 %removal of DOC	similar to OECD 302B
cyclohexanone	108-94-1	Experimental Biodegradation	14 days	BOD	87 %BOD/ThOD	OECD 301C - MITI test (I)
Acid	Trade Secret	Modeled Biodegradation	28 days	BOD	3 %BOD/ThOD	Catalogic™
Polymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
xylene	1330-20-7	Analogous Compound Biodegradation	28 days	BOD	94 %BOD/ThOD	OECD 301F - Manometric respirometry
xylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Experimental Aquatic Inherent Biodegrad.	28 days	BOD	3 %BOD/ThOD	OECD 302C - Modified MITI (II)
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
n-butyl methacrylate	97-88-1	Experimental Biodegradation	28 days	BOD	88 %BOD/ThOD	OECD 301C - MITI test (I)
n-butyl methacrylate	97-88-1	Experimental Photolysis		Photolytic half-life (in air)	5.4 hours (t 1/2)	
n-butyl methacrylate	97-88-1	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Biodegradation	28 days	BOD	11.6 %BOD/ThOD	OECD 301F - Manometric respirometry
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	9.9 days (t 1/2)	OECD 111 Hydrolysis func of pH
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 No.	Test type	Duration	Study Type	Test result	Protocol
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Experimental Bioconcentration		Log Kow	0.61	EC A.8 Partition Coefficient
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Bioconcentration		Log Kow	0.36	OECD 107 log Kow shke flsk mtd
cyclohexanone	108-94-1	Experimental Bioconcentration		Log Kow	0.86	OECD 107 log Kow shke flsk mtd
Acid	Trade Secret	Modeled Bioconcentration		Bioaccumulation factor	35	Catalogic™
Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
xylene	1330-20-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	<=25.9	
xylene	1330-20-7	Analogous Compound Bioconcentration		Log Kow	3.2	

3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Experimental Bioconcentration		Log Kow	≥5.7	EC A.8 Partition Coefficient
n-butyl methacrylate	97-88-1	Experimental Bioconcentration		Log Kow	3.03	OECD 107 log Kow shke flsk mtd
2,3-Epoxypropyl neodecanoate	26761-45-5	Modeled Bioconcentration		Bioaccumulation factor	28	Catalogic™
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

Material	Cas No.	Test type	Study Type	Test result	Protocol
Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate	88917-22-0	Experimental Mobility in Soil	Koc	187 l/kg	OECD 121 Estim. of Koc by HPLC
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Mobility in Soil	Koc	4 l/kg	Episuite™
cyclohexanone	108-94-1	Modeled Mobility in Soil	Koc	39 l/kg	Episuite™
Acid	Trade Secret	Analogous Compound Mobility in Soil	Koc	1,614 l/kg	OECD 121 Estim. of Koc by HPLC
xylene	1330-20-7	Analogous Compound Mobility in Soil	Koc	537 l/kg	
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Modeled Mobility in Soil	Koc	>430000 l/kg	OECD 121 Estim. of Koc by HPLC
n-butyl methacrylate	97-88-1	Analogous Compound Mobility in Soil	Koc	1,480 l/kg	OECD 106 Adsp-Desb Batch Equil
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Mobility in Soil	Koc	143 l/kg	OECD 121 Estim. of Koc by HPLC
toluene	108-88-3	Experimental Mobility in Soil	Koc	37-160 l/kg	

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.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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)

20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 - UN Number or ID number	UN1210	UN1210	UN1210
14.2 UN proper shipping name	PRINTING INK	PRINTING INK	PRINTING INK
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable.	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 Marine Transport in bulk according to IMO instruments	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	F1	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
cyclohexanone	108-94-1	Gr. 3: Not classifiable	International Agency for Research on Cancer
n-butyl methacrylate	97-88-1	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
toluene	108-88-3	Gr. 3: Not classifiable	International Agency for Research on Cancer
xylene	1330-20-7	Gr. 3: Not classifiable	International Agency for Research on Cancer

Restrictions on the manufacture, placing on the market and use:
The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

Ingredient	CAS Nbr
toluene	108-88-3
xylene	1330-20-7

Restriction status: listed in REACH Annex XVII
Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

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. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA 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
P5c FLAMMABLE LIQUIDS*	5000	50000

*If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply

Seveso named dangerous substances, Annex 1, Part 2
None

Regulation (EU) No 649/2012
No chemicals listed

15.2. Chemical Safety Assessment
A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
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.

List of Relevant Notas

Nota C	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
Nota D	Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words ‘non-stabilised’.

Revision information:
EU Section 14 - Table Data information was added.
EU Section 14 - Table Headers information was added.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Label: Graphic information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 4: First Aid - notes to physician (REACH/GHS) information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 08: Personal Protection - Apron Statement information was added.
Section 8: Personal Protection - Skin/body information information was deleted.
Section 8: PNEC table row information was modified.
Section 8: Skin protection - protective clothing information information was deleted.
Section 09: Odor information was modified.
Section 9: Vapour pressure value information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.

Section 11: Respiratory Sensitization Table information was deleted.
Section 11: Respiratory Sensitization text information was added.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 14 Classification Code – Main Heading information was deleted.
Section 14 Classification Code – Regulation Data information was deleted.
Section 14 Control Temperature – Main Heading information was deleted.
Section 14 Control Temperature – Regulation Data information was deleted.
Section 14 Emergency Temperature – Main Heading information was deleted.
Section 14 Emergency Temperature – Regulation Data information was deleted.
Section 14 Hazard Class + Sub Risk – Main Heading information was deleted.
Section 14 Hazard Class + Sub Risk – Regulation Data information was deleted.
Section 14 Other Dangerous Goods – Main Heading information was deleted.
Section 14 Other Dangerous Goods – Regulation Data information was deleted.
Section 14 Packing Group – Main Heading information was deleted.
Section 14 Packing Group – Regulation Data information was deleted.
Section 14 Proper Shipping Name information was deleted.
Section 14 Regulations – Main Headings information was deleted.
Section 14 Segregation – Regulation Data information was deleted.
Section 14 Segregation Code – Main Heading information was deleted.
Section 14 Special Precautions – Main Heading information was deleted.
Section 14 Special Precautions – Regulation Data information was deleted.
Section 14 Transport in bulk – Regulation Data information was deleted.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.
Section 14 UN Number Column data information was deleted.
Section 14 UN Number information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.
Section 16: Two-column table displaying the unique list of Notas for all components of the given material. information was added.

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.

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