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™ Process Color 883N v2 Blue

Product Identification Numbers
75-0002-1707-7

7100324653

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, 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.
The aspiration hazard classification is not required due to the product's viscosity.

CLASSIFICATION:
Flammable Liquid, Category 3 - Flam. Liq. 3; H226

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Carcinogenicity, Category 1B - Carc. 1B; H350
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
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) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Hydrocarbons, C10 aromatics, <1% naphthalene		918-811-1	15 - 40
cyclohexanone	108-94-1	203-631-1	3 - 7
cumene	98-82-8	202-704-5	< 0.2

HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H350	May cause cancer.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A	Avoid breathing vapours.
P280G	Wear respiratory protection 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.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains 2,3-epoxypropyl neodecanoate. | n-butyl methacrylate. | (R)-p-mentha-1,8-diene. May produce an allergic reaction.

Supplemental Precautionary Statements:
Restricted to professional users.

19% of the mixture consists of components of unknown acute oral toxicity.
19% of the mixture consists of components of unknown acute dermal toxicity.
32% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 19% of components with unknown hazards to the aquatic environment.

Nota P applied.

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]
Hydrocarbons, C10 aromatics, <1% naphthalene	(EC-No.) 918-811-1	15 - 40	Asp. Tox. 1, H304 STOT SE 3, H336 EUH066 Aquatic Chronic 2, H411
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
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	(EC-No.) 701-188-3	7 - 13	Skin Irrit. 2, H315 Eye Irrit. 2, H319
cyclohexanone	(CAS-No.) 108-94-1 (EC-No.) 203-631-1	3 - 7	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318
2-methoxy-1-methylethyl acetate	(CAS-No.) 108-65-6 (EC-No.) 203-603-9	3 - 7	Flam. Liq. 3, H226 STOT SE 3, H336
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	(CAS-No.) 27306-78-1	1 - 5	Acute Tox. 4, H332 Acute Tox. 4, H332 Eye Irrit. 2, H319 Aquatic Chronic 2, H411

Vinyl acetate - vinyl alcohol - vinyl chloride polymer	(CAS-No.) 25086-48-0	1 - 5	Substance not classified as hazardous
Solvent naphtha (petroleum), light arom.	(CAS-No.) 64742-95-6 (EC-No.) 265-199-0	1 - 5	Asp. Tox. 1, H304 Nota P Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 3, H412
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	(CAS-No.) 147-14-8 (EC-No.) 205-685-1	1 - 5	Substance not classified as hazardous
1,2,4-trimethylbenzene	(CAS-No.) 95-63-6 (EC-No.) 202-436-9	0.5 - 1.5	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 2, H411
xylene	(CAS-No.) 1330-20-7 (EC-No.) 215-535-7	0.5 - 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
(R)-p-mentha-1,8-diene	(CAS-No.) 5989-27-5 (EC-No.) 227-813-5	< 0.5	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400,M=1 Aquatic Chronic 3, H412 Nota C
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. 1, H317 Muta. 2, H341 Aquatic Chronic 2, H411
Glycolic acid, butyl ester	(CAS-No.) 7397-62-8 (EC-No.) 230-991-7	< 0.2	Eye Dam. 1, H318 Repr. 2, H361d STOT SE 3, H335
cumene	(CAS-No.) 98-82-8 (EC-No.) 202-704-5	< 0.2	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Carc. 1B, H350 STOT SE 3, H335 Aquatic Chronic 2, H411 STOT SE 3, H336
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

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

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:
Irritation to the skin (localized redness, swelling, itching, and dryness). Dermal defatting (localized redness, itching, drying and cracking of skin). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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
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. 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. 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);TWA(8 hours):50 ppm(275 mg/m3);STEL(15 minutes):550 mg/m3(100 ppm);STEL(15 minutes):100 ppm(550 mg/m3)	SKIN
toluene	108-88-3	Ireland OELs	TWA(8 hours):192 mg/m3(50 ppm);TWA(8 hours):50 ppm(192 mg/m3);STEL(15 minutes):384 mg/m3(100 ppm);STEL(15 minutes):100 ppm(384 mg/m3)	SKIN
cyclohexanone	108-94-1	Ireland OELs	TWA(8 hours):40.8 mg/m3(10 ppm);TWA(8 hours):10 ppm(40.8 mg/m3);STEL(15 minutes):81.6 mg/m3(20 ppm);STEL(15 minutes):20 ppm(81.6 mg/m3)	SKIN
xylene	1330-20-7	Ireland OELs	TWA(8 hours):221 mg/m3(50 ppm);TWA(8 hours):50 ppm(221 mg/m3);STEL(15 minutes):442 mg/m3(100 ppm);STEL(15 minutes):100 ppm(442 mg/m3)	SKIN
1,2,4-trimethylbenzene	95-63-6	Ireland OELs	TWA(8 hours):100 mg/m3(20 ppm);TWA(8 hours):20 ppm(100 mg/m3)	
cumene	98-82-8	Ireland OELs	TWA(8 hours):50 mg/m3(10 ppm);TWA(8 hours):10 ppm(50 mg/m3);STEL(15 minutes):250 mg/m3(50 ppm);STEL(15 minutes):50 ppm(250 mg/m3)	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.

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 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
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 types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Blue
Odor	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)	*No data available.*

Flammable Limits(UEL)	*No data available.*
Flash point	52.2 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture reacts with water*
Kinematic Viscosity	1,162 mm²/sec
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	<=493.3 Pa [@ 20 ºC]
Density	0.99 g/ml
Relative density	0.99 [*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	<=0.05 [*Ref Std:*BUOAC=1]
Molecular weight	*Not applicable.*
Percent volatile	50 - 65 % weight

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 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
May be harmful if inhaled. 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
May be harmful in contact with skin. 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
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
May be harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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 >2,000 - =5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Hydrocarbons, C10 aromatics, <1% naphthalene	Inhalation-Vapour	Professional judgement	LC50 estimated to be 20 - 50 mg/l
Hydrocarbons, C10 aromatics, <1% naphthalene	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrocarbons, C10 aromatics, <1% naphthalene	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-	Dermal		LD50 estimated to be > 5,000 mg/kg

propenoate and methyl 2-methyl-2-propenoate			
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
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Dermal	Rat	LD50 > 2,000 mg/kg
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.76 mg/l
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Ingestion	Rat	LD50 > 2,000 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
Solvent naphtha (petroleum), light arom.	Dermal	Rabbit	LD50 > 2,000 mg/kg
Solvent naphtha (petroleum), light arom.	Inhalation-Vapour (4 hours)	Rat	LC50 > 5.2 mg/l
Solvent naphtha (petroleum), light arom.	Ingestion	Rat	LD50 > 5,000 mg/kg
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Inhalation-Vapour	Professional judgement	LC50 estimated to be 10 - 20 mg/l
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Dermal	Rat	LD50 > 2,000 mg/kg
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Dermal		LD50 estimated to be > 5,000 mg/kg
Vinyl acetate - vinyl alcohol - vinyl chloride polymer	Dermal	Rabbit	LD50 > 8,000 mg/kg
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Rat	LD50 10,000 mg/kg
Vinyl acetate - vinyl alcohol - vinyl chloride polymer	Ingestion	Rat	LD50 > 8,000 mg/kg
1,2,4-trimethylbenzene	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2,4-trimethylbenzene	Inhalation-Vapour (4 hours)	Rat	LC50 18 mg/l
1,2,4-trimethylbenzene	Ingestion	Rat	LD50 3,400 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
(R)-p-mentha-1,8-diene	Inhalation-Vapour (4 hours)	Mouse	LC50 > 3.14 mg/l
(R)-p-mentha-1,8-diene	Dermal	Rabbit	LD50 > 5,000 mg/kg
(R)-p-mentha-1,8-diene	Ingestion	Rat	LD50 4,400 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
cumene	Dermal	Rabbit	LD50 > 3,160 mg/kg
cumene	Inhalation-Vapour (4 hours)	Rat	LC50 39.4 mg/l

cumene	Ingestion	Rat	LD50 2,260 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
Glycolic acid, butyl ester	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Glycolic acid, butyl ester	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.2 mg/l
Glycolic acid, butyl ester	Ingestion	Rat	LD50 4,595 mg/kg
2,3-epoxypropyl neodecanoate	Dermal	Rat	LD50 > 2,000 mg/kg
2,3-epoxypropyl neodecanoate	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Hydrocarbons, C10 aromatics, <1% naphthalene	Rabbit	Minimal irritation
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Rabbit	Irritant
2-methoxy-1-methylethyl acetate	Rabbit	No significant irritation
cyclohexanone	Rabbit	Irritant
Solvent naphtha (petroleum), light arom.	Rabbit	Irritant
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Rabbit	No significant irritation
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Rabbit	No significant irritation
Vinyl acetate - vinyl alcohol - vinyl chloride polymer	Professional judgement	No significant irritation
1,2,4-trimethylbenzene	Rabbit	Irritant
xylene	Rabbit	Mild irritant
(R)-p-mentha-1,8-diene	Rabbit	Irritant
n-butyl methacrylate	Rabbit	Irritant
cumene	Rabbit	Minimal irritation
toluene	Rabbit	Irritant
Glycolic acid, butyl ester	Rabbit	No significant irritation
2,3-epoxypropyl neodecanoate	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Hydrocarbons, C10 aromatics, <1% naphthalene	Rabbit	Mild irritant
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Rabbit	Moderate irritant
2-methoxy-1-methylethyl acetate	Rabbit	Mild irritant
cyclohexanone	In vitro data	Corrosive
Solvent naphtha (petroleum), light arom.	Rabbit	Mild irritant
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Rabbit	Severe irritant
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Rabbit	No significant irritation
Vinyl acetate - vinyl alcohol - vinyl chloride polymer	Professional judgement	No significant irritation
1,2,4-trimethylbenzene	Rabbit	Mild irritant
xylene	Rabbit	Mild irritant
(R)-p-mentha-1,8-diene	Rabbit	Mild irritant
n-butyl methacrylate	Rabbit	Mild irritant
cumene	Rabbit	Mild irritant

toluene	Rabbit	Moderate irritant
Glycolic acid, butyl ester	Rabbit	Corrosive
2,3-epoxypropyl neodecanoate	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Hydrocarbons, C10 aromatics, <1% naphthalene	Guinea pig	Not classified
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Human and animal	Not classified
2-methoxy-1-methylethyl acetate	Guinea pig	Not classified
cyclohexanone	Guinea pig	Not classified
Solvent naphtha (petroleum), light arom.	Guinea pig	Not classified
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Guinea pig	Not classified
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Human	Not classified
1,2,4-trimethylbenzene	Guinea pig	Not classified
(R)-p-mentha-1,8-diene	Mouse	Sensitising
n-butyl methacrylate	Guinea pig	Sensitising
cumene	Guinea pig	Not classified
toluene	Guinea pig	Not classified
Glycolic acid, butyl ester	Guinea pig	Not classified
2,3-epoxypropyl neodecanoate	Guinea pig	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
Hydrocarbons, C10 aromatics, <1% naphthalene	In Vitro	Not mutagenic
Hydrocarbons, C10 aromatics, <1% naphthalene	In vivo	Not mutagenic
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	In Vitro	Not mutagenic
2-methoxy-1-methylethyl acetate	In Vitro	Not mutagenic
cyclohexanone	In vivo	Not mutagenic
cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	In Vitro	Not mutagenic
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	In vivo	Not mutagenic
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	In Vitro	Not mutagenic
1,2,4-trimethylbenzene	In Vitro	Not mutagenic
xylene	In Vitro	Not mutagenic
xylene	In vivo	Not mutagenic
(R)-p-mentha-1,8-diene	In Vitro	Not mutagenic
(R)-p-mentha-1,8-diene	In vivo	Not mutagenic
n-butyl methacrylate	In Vitro	Not mutagenic
n-butyl methacrylate	In vivo	Not mutagenic
cumene	In Vitro	Not mutagenic
cumene	In vivo	Not mutagenic

toluene	In Vitro	Not mutagenic
toluene	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

Carcinogenicity

Name	Route	Species	Value
cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Solvent naphtha (petroleum), light arom.	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Mouse	Not carcinogenic
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
(R)-p-mentha-1,8-diene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
n-butyl methacrylate	Inhalation	Multiple animal species	Carcinogenic.
cumene	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
Hydrocarbons, C10 aromatics, <1% naphthalene	Not specified.	Not classified for female reproduction	Rat	NOAEL Not available	2 generation
Hydrocarbons, C10 aromatics, <1% naphthalene	Not specified.	Not classified for male reproduction	Rat	NOAEL Not available	2 generation
Hydrocarbons, C10 aromatics, <1% naphthalene	Not specified.	Not classified for development	Rat	NOAEL Not available	2 generation
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Ingestion	Not classified for development	Rat	NOAEL 600 mg/kg/day	during gestation
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Ingestion	Not classified for female reproduction	Rat	NOAEL 250 mg/kg/day	premating into lactation
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Ingestion	Toxic to male reproduction	Rat	NOAEL 250 mg/kg/day	5 weeks
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	premating & during

				mg/kg/day	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	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
cyclohexanone	Ingestion	Not classified for development	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2 mg/l	2 generation
Solvent naphtha (petroleum), light arom.	Inhalation	Not classified for female reproduction	Rat	NOAEL 1,500 ppm	2 generation
Solvent naphtha (petroleum), light arom.	Inhalation	Not classified for male reproduction	Rat	NOAEL 1,500 ppm	2 generation
Solvent naphtha (petroleum), light arom.	Inhalation	Not classified for development	Rat	NOAEL 500 ppm	2 generation
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	28 days
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	premating into lactation
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	42 days
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
1,2,4-trimethylbenzene	Inhalation	Not classified for female reproduction	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-trimethylbenzene	Inhalation	Not classified for male reproduction	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-trimethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 1.5 mg/l	during gestation
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
(R)-p-mentha-1,8-diene	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	premating & during gestation
(R)-p-mentha-1,8-diene	Ingestion	Not classified for development	Multiple animal species	NOAEL 591 mg/kg/day	during organogenesis
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

cumene	Inhalation	Not classified for development	Rabbit	NOAEL 11.3 mg/l	during organogenesis
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
Glycolic acid, butyl ester	Ingestion	Toxic to development	Rat	NOAEL 250 mg/kg/day	during organogenesis

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
Hydrocarbons, C10 aromatics, <1% naphthalene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
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 system depression	May cause drowsiness or dizziness	Guinea pig	LOAEL 16.1 mg/l	6 hours
cyclohexanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Solvent naphtha (petroleum), light arom.	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Solvent naphtha (petroleum), light arom.	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Professional judgement	NOAEL Not available	
Solvent naphtha (petroleum), light arom.	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

1,2,4-trimethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
1,2,4-trimethylbenzene	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
1,2,4-trimethylbenzene	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
(R)-p-mentha-1,8-diene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
(R)-p-mentha-1,8-diene	Ingestion	nervous system	Not classified		NOAEL Not available	
n-butyl methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	
cumene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
cumene	Inhalation	respiratory irritation	May cause respiratory irritation	Human	LOAEL 0.2 mg/l	occupational exposure
cumene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	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
Glycolic acid, butyl ester	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	NOAEL 0.4 mg/l	4 hours

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Inhalation	hematopoietic system | eyes | respiratory system	Not classified	Rat	NOAEL 2.23 mg/l	13 weeks
Reaction mass of α,α-4-trimethyl-(1S)-3-	Ingestion	liver | kidney and/or bladder | heart | skin	Not classified	Rat	NOAEL 750 mg/kg/day	5 weeks

cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol		| endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | respiratory system				
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	Not classified	Rabbit	NOAEL 0.76 mg/l	50 days
cyclohexanone	Ingestion	liver	Not classified	Mouse	NOAEL 4,800 mg/kg/day	90 days
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Dermal	skin	Not classified	Rat	NOAEL 1,551 mg/kg/day	9 days
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.025 mg/l	9 days
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 110 mg/kg/day	90 days
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	Ingestion	liver | kidney and/or bladder | heart | gastrointestinal tract | hematopoietic system | nervous system | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	endocrine system | hematopoietic system | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	not available
1,2,4-trimethylbenzene	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	3 months
1,2,4-trimethylbenzene	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.1 mg/l	3 months
1,2,4-trimethylbenzene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
1,2,4-trimethylbenzene	Inhalation	liver | kidney and/or bladder | heart | endocrine system | gastrointestinal tract | immune system	Not classified	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-trimethylbenzene	Ingestion	hematopoietic	Not classified	Rat	NOAEL 600	14 days

		system			mg/kg/day	
1,2,4-trimethylbenzene	Ingestion	liver | immune system | kidney and/or bladder	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
(R)-p-mentha-1,8-diene	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 75 mg/kg/day	103 weeks
(R)-p-mentha-1,8-diene	Ingestion	liver	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
(R)-p-mentha-1,8-diene	Ingestion	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 600 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 system | hematopoietic system | liver | nervous system | respiratory system	Not classified	Rat	NOAEL 11 mg/l	28 days
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 |	Not classified	Rat	NOAEL 360 mg/kg/day	90 days

		immune system				
cumene	Inhalation	auditory system | endocrine system | hematopoietic system | liver | nervous system | eyes	Not classified	Rat	NOAEL 59 mg/l	13 weeks
cumene	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 4.9 mg/l	13 weeks
cumene	Inhalation	respiratory system	Not classified	Rat	NOAEL 59 mg/l	13 weeks
cumene	Ingestion	kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | respiratory system	Not classified	Rat	NOAEL 769 mg/kg/day	6 months
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
Glycolic acid, butyl ester	Ingestion	blood | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	90 days
2,3-epoxypropyl neodecanoate	Ingestion	hematopoietic system | liver	Not classified	Rat	NOAEL 400 mg/kg/day	5 weeks
2,3-epoxypropyl neodecanoate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 40 mg/kg/day	5 weeks

Aspiration Hazard

Name	Value
Hydrocarbons, C10 aromatics, <1% naphthalene	Aspiration hazard
Solvent naphtha (petroleum), light arom.	Aspiration hazard
1,2,4-trimethylbenzene	Aspiration hazard
xylene	Aspiration hazard

(R)-p-mentha-1,8-diene	Aspiration hazard
cumene	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
Hydrocarbons, C10 aromatics, <1% naphthalene	918-811-1	Green algae	Estimated	72 hours	EL50	3 mg/l
Hydrocarbons, C10 aromatics, <1% naphthalene	918-811-1	Rainbow trout	Estimated	96 hours	LL50	5 mg/l
Hydrocarbons, C10 aromatics, <1% naphthalene	918-811-1	Water flea	Estimated	48 hours	EL50	10 mg/l
Hydrocarbons, C10 aromatics, <1% naphthalene	918-811-1	Green algae	Estimated	72 hours	NOEL	1 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
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Green algae	Experimental	72 hours	EC50	68 mg/l
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Water flea	Experimental	48 hours	EC50	73 mg/l
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-	701-188-3	Zebra Fish	Experimental	96 hours	LC50	62-80 mg/l

cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol						
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Green algae	Experimental	72 hours	NOEC	3.9 mg/l
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Redworm	Experimental	14 days	LC50	499-799 mg/kg (Dry Weight)
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
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Green algae	Endpoint not reached	72 hours	ErC50	>100 mg/l
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Common Carp	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Green algae	Endpoint not reached	72 hours	ErC10	>100 mg/l
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Water flea	Experimental	21 days	No tox obs at lmt of water sol	>100 mg/l
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Activated sludge	Analogous Compound	30 minutes	EC20	750 mg/l

29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Redworm	Analogous Compound	14 days	LC50	>1,000 mg/kg (Dry Weight)
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Green algae	Estimated	96 hours	EC50	32 mg/l
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Rainbow trout	Estimated	96 hours	LC50	4.5 mg/l
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Water flea	Estimated	48 hours	LC50	23.4 mg/l
Solvent naphtha (petroleum), light arom.	64742-95-6	Fathead minnow	Estimated	96 hours	LL50	8.2 mg/l
Solvent naphtha (petroleum), light arom.	64742-95-6	Green algae	Estimated	72 hours	EL50	7.9 mg/l
Solvent naphtha (petroleum), light arom.	64742-95-6	Water flea	Estimated	48 hours	EL50	3.2 mg/l
Solvent naphtha (petroleum), light arom.	64742-95-6	Green algae	Estimated	72 hours	NOEL	0.22 mg/l
Solvent naphtha (petroleum), light arom.	64742-95-6	Water flea	Experimental	21 days	NOEL	2.6 mg/l
Vinyl acetate - vinyl alcohol - vinyl chloride polymer	25086-48-0	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
1,2,4-trimethylbenzene	95-63-6	Fathead minnow	Experimental	96 hours	LC50	7.72 mg/l
1,2,4-trimethylbenzene	95-63-6	Mysid Shrimp	Experimental	96 hours	LC50	2 mg/l
1,2,4-trimethylbenzene	95-63-6	Water flea	Experimental	48 hours	LC50	3.6 mg/l
1,2,4-trimethylbenzene	95-63-6	Water flea	Analogous Compound	21 days	NOEC	0.4 mg/l
xylene	1330-20-7	Activated sludge	Estimated	3 hours	NOEC	157 mg/l
xylene	1330-20-7	Green algae	Estimated	72 hours	EC50	4.36 mg/l
xylene	1330-20-7	Rainbow trout	Estimated	96 hours	LC50	2.6 mg/l
xylene	1330-20-7	Water flea	Estimated	48 hours	EC50	3.82 mg/l
xylene	1330-20-7	Green algae	Estimated	72 hours	NOEC	0.44 mg/l
xylene	1330-20-7	Water flea	Estimated	7 days	NOEC	0.96 mg/l
xylene	1330-20-7	Rainbow trout	Experimental	56 days	NOEC	>1.3 mg/l
(R)-p-mentha-1,8-diene	5989-27-5	Fathead minnow	Experimental	96 hours	LC50	0.702 mg/l
(R)-p-mentha-1,8-diene	5989-27-5	Green algae	Experimental	72 hours	ErC50	0.32 mg/l
(R)-p-mentha-1,8-diene	5989-27-5	Water flea	Experimental	48 hours	EC50	0.307 mg/l
(R)-p-mentha-1,8-diene	5989-27-5	Fathead minnow	Experimental	8 days	EC10	0.32 mg/l
(R)-p-mentha-1,8-diene	5989-27-5	Green algae	Experimental	72 hours	ErC10	0.174 mg/l
(R)-p-mentha-1,8-diene	5989-27-5	Water flea	Experimental	21 days	NOEC	0.153 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
cumene	98-82-8	Activated sludge	Experimental	3 hours	EC10	>2,000 mg/l
cumene	98-82-8	Green algae	Experimental	72 hours	EC50	2.6 mg/l
cumene	98-82-8	Mysid Shrimp	Experimental	96 hours	EC50	1.2 mg/l
cumene	98-82-8	Rainbow trout	Experimental	96 hours	LC50	2.7 mg/l
cumene	98-82-8	Water flea	Experimental	48 hours	EC50	2.14 mg/l
cumene	98-82-8	Green algae	Experimental	72 hours	NOEC	0.22 mg/l
cumene	98-82-8	Water flea	Experimental	21 days	NOEC	0.35 mg/l
Glycolic acid, butyl ester	7397-62-8	Bacteria	Experimental	18 hours	EC50	2,320 mg/l
Glycolic acid, butyl ester	7397-62-8	Water flea	Experimental	24 hours	EC50	280 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
Hydrocarbons, C10 aromatics, <1% naphthalene	918-811-1	Experimental Biodegradation	28 days	BOD	49.6 %BOD/COD	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
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Experimental Biodegradation	28 days	CO2 evolution	80 %CO2 evolution/THCO2 evolution	OECD 310 CO2 Headspace
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)
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Experimental Biodegradation	28 days	BOD	<1 %BOD/ThOD	similar to OECD 301F
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Modeled Biodegradation	28 days	BOD	1 %BOD/ThOD	Catalogic™
Solvent naphtha (petroleum), light arom.	64742-95-6	Estimated Biodegradation	28 days	BOD	78 %BOD/COD	OECD 301F - Manometric respirometry
Vinyl acetate - vinyl alcohol - vinyl chloride polymer	25086-48-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
1,2,4-trimethylbenzene	95-63-6	Experimental Biodegradation	28 days	BOD	>60 %BOD/ThOD	OECD 301F - Manometric respirometry
1,2,4-trimethylbenzene	95-63-6	Experimental Photolysis		Photolytic half-life (in air)	11.8 hours (t 1/2)	
xylene	1330-20-7	Experimental Biodegradation	28 days	BOD	90-98 %BOD/ThOD	OECD 301F - Manometric respirometry
xylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
(R)-p-mentha-1,8-diene	5989-27-5	Experimental Biodegradation	14 days	BOD	98 %BOD/ThOD	OECD 301C - MITI test (I)
(R)-p-mentha-1,8-diene	5989-27-5	Experimental Biodegradation	14 days	Dissolv. Organic Carbon Deplet	>93.8 %removal of DOC	OECD 303A - Simulated Aerobic
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
cumene	98-82-8	Experimental Biodegradation	14 days	BOD	33 %BOD/ThOD	OECD 301C - MITI test (I)

cumene	98-82-8	Experimental Photolysis		Photolytic half-life (in air)	4.5 days (t 1/2)	
Glycolic acid, butyl ester	7397-62-8	Experimental Biodegradation	28 days	CO2 evolution	81 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
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
Hydrocarbons, C10 aromatics, <1% naphthalene	918-811-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Analogous Compound Bioconcentration		Log Kow	2.78	
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
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Experimental BCF - Fish	42 days	Bioaccumulation factor	≤11	OECD305-Bioconcentration
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Experimental Bioconcentration		Log Kow	-1	
Glycols, polyethylene, methyl 3-[1,3,3,3-tetramethyl-1-(trimethylsiloxy)disiloxanyl]propyl ether	27306-78-1	Modeled Bioconcentration		Bioaccumulation factor	331	Catalogic™
Solvent naphtha (petroleum), light arom.	64742-95-6	Estimated BCF - Fish	42 days	Bioaccumulation factor	598	OECD305-Bioconcentration
Vinyl acetate - vinyl alcohol - vinyl chloride polymer	25086-48-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,2,4-trimethylbenzene	95-63-6	Experimental BCF - Fish	56 days	Bioaccumulation factor	≤275	OECD305-Bioconcentration
1,2,4-trimethylbenzene	95-63-6	Experimental Bioconcentration		Log Kow	3.63	
xylene	1330-20-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	25.9	
(R)-p-mentha-1,8-diene	5989-27-5	Modeled Bioconcentration		Bioaccumulation factor	2100	Catalogic™
(R)-p-mentha-1,8-diene	5989-27-5	Experimental Bioconcentration		Log Kow	4.57	
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™
cumene	98-82-8	Modeled Bioconcentration		Bioaccumulation factor	140	Catalogic™
cumene	98-82-8	Experimental Bioconcentration		Log Kow	3.55	OECD 107 log Kow shke flsk mtd

Glycolic acid, butyl ester	7397-62-8	Modeled Bioconcentration		Bioaccumulation factor	2.8	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
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Modeled Mobility in Soil	Koc	213 l/kg	Episuite™
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™
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	Modeled Mobility in Soil	Koc	10,000,000,000 l/kg	Episuite™
1,2,4-trimethylbenzene	95-63-6	Modeled Mobility in Soil	Koc	1,400 l/kg	Episuite™
(R)-p-mentha-1,8-diene	5989-27-5	Modeled Mobility in Soil	Koc	9,245 l/kg	Episuite™
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
cumene	98-82-8	Modeled Mobility in Soil	Koc	700	Episuite™
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(HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM))
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
cumene	98-82-8	Carc. 1B	Regulation (EC) No. 1272/2008, Table 3.1
cumene	98-82-8	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
cyclohexanone	108-94-1	Gr. 3: Not classifiable	International Agency for Research on Cancer
(R)-p-mentha-1,8-diene	5989-27-5	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. The components of this product are in compliance with the new substance notification requirements of CEPA. 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 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

EUH066	Repeated exposure may cause skin dryness or cracking.
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.
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.
H350	May cause cancer.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
No revision information

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