



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 Colour 884I, Yellow

Product Identification Numbers

75-0301-1088-8

7000004860

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 United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
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1.4. Emergency telephone number

+44 (0)1344 858 000

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
 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) | GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
cyclohexanone	108-94-1	203-631-1	< 10

HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
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.
P273	Avoid release to the environment.
P280A	Wear 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.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains 2,3-Epoxypropyl neodecanoate. n-butyl methacrylate. May produce an allergic reaction.
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32% of the mixture consists of components of unknown acute oral toxicity.
 32% of the mixture consists of components of unknown acute dermal toxicity.
 32% of the mixture consists of components of unknown acute inhalation toxicity.

Contains 32% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Contains a substance that meets the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII

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]
Dipropylene glycol methyl ether acetate	(CAS-No.) 88917-22-0 (REACH-No.) 01-0000015637-64	40 - 70	Substance not classified as hazardous
Acrylic polymers	Trade Secret	15 - 40	Substance not classified as hazardous
cyclohexanone	(CAS-No.) 108-94-1 (EC-No.) 203-631-1 (REACH-No.) 01-2119453616-35	< 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
2-methoxy-1-methylethyl acetate	(CAS-No.) 108-65-6 (EC-No.) 203-603-9 (REACH-No.) 01-2119475791-29	< 10	Flam. Liq. 3, H226 STOT SE 3, H336
Vinyl polymer	Trade Secret	1 - 5	Substance not classified as hazardous
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	(CAS-No.) 106276-80-6	1 - 5	Substance not classified as hazardous
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
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) - 2,5-PYRROLIDINEDIONE	(CAS-No.) 79720-19-7 (EC-No.) 279-242-6	< 0.6	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	< 0.4	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT SE 3, H335 Nota D

toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9	< 0.3	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
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
Naphthenic acids, nickel salts	(CAS-No.) 61788-71-4 (EC-No.) 263-000-1	< 0.03	Acute Tox. 4, H302 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350i STOT RE 1, H372 Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10

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:

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

<u>Substance</u>	<u>Condition</u>
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Hydrogen Fluoride	During combustion.
Oxides of nitrogen.	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. 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	UK HSC	TWA:274 mg/m ³ (50 ppm);STEL:548 mg/m ³ (100 ppm)	SKIN
toluene	108-88-3	UK HSC	TWA: 191 mg/m ³ (50 ppm); STEL: 384 mg/m ³ (100 ppm)	SKIN
cyclohexanone	108-94-1	UK HSC	TWA:41 mg/m ³ (10 ppm);STEL:82 mg/m ³ (20 ppm)	SKIN
xylene	1330-20-7	UK HSC	TWA:220 mg/m ³ (50 ppm);STEL:441 mg/m ³ (100 ppm)	SKIN
Nickel, water-soluble inorganic compounds, except nickel carbonyl	61788-71-4	UK HSC	TWA(as Ni):0.1 mg/m ³	SKIN; Resp Sensitizer

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

Ingredient	CAS Nbr	Agency	Determinant	Biological Specimen	Sampling Time	Value	Additional comments
cyclohexanone	108-94-1	UK EH40 BMGVs	Cyclohexanol	Creatinine in urine	EOS	2 mmol/mol	
xylene	1330-20-7	UK EH40 BMGVs	Methyl hippuric acid	Creatinine in urine	EOS	650 mmol/mol	

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)

EOS: End of shift.

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/m ³

2-methoxy-1-methylethyl acetate		Worker	Inhalation, Short-term exposure, Local effects	550 mg/m ³
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Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
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 UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

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

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

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

8.2.3. Environmental exposure controls

Refer to Annex

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	Sweet Ether
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>Not applicable.</i>
Boiling point/boiling range	>=140 °C
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	1.1 % volume
Flammable Limits(UEL)	8.6 % volume
Flash point	42.2 °C [<i>Test Method:</i> Tagliabue closed cup]
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
pH	
Kinematic Viscosity	1,157.89473684211 mm ² /sec
Water solubility	<i>No data available.</i>
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	<=493.3 Pa [@ 20 °C]
Density	0.95 g/ml
Relative density	0.95 [<i>Ref Std:</i> WATER=1]
Relative Vapor Density	<i>No data available.</i>

9.2. Other information**9.2.2 Other safety characteristics**

EU Volatile Organic Compounds	<i>No data available.</i>
Evaporation rate	<=0.4 [<i>Ref Std:</i> BUOAC=1]

Molecular weight
Percent volatile

Not applicable.
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

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

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
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 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
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1 mg/l
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Vinyl polymer	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl 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-	Rat	LC50 > 27 mg/l

	Dust/Mist (4 hours)		
n-butyl methacrylate	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
2,3-Epoxypropyl neodecanoate	Dermal	Rat	LD50 > 2,000 mg/kg
2,3-Epoxypropyl neodecanoate	Ingestion	Rat	LD50 > 2,000 mg/kg
Naphthenic acids, nickel salts	Ingestion	Rat	LD50 419 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
2-methoxy-1-methylethyl acetate	Rabbit	No significant irritation
cyclohexanone	Rabbit	Irritant
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Rabbit	No significant irritation
Vinyl 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
toluene	Rabbit	Irritant
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
Naphthenic acids, nickel salts	Professional judgement	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
2-methoxy-1-methylethyl acetate	Rabbit	Mild irritant
cyclohexanone	In vitro data	Corrosive
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Rabbit	No significant irritation
Vinyl 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
toluene	Rabbit	Moderate irritant
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
Naphthenic acids, nickel salts	Professional judgement	Mild irritant

Skin Sensitisation

Name	Species	Value

Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
2-methoxy-1-methylethyl acetate	Guinea pig	Not classified
cyclohexanone	Guinea pig	Not classified
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Human	Not classified
n-butyl methacrylate	Guinea pig	Sensitising
toluene	Guinea pig	Not classified
2,3-Epoxypropyl neodecanoate	Guinea pig	Sensitising
Naphthenic acids, nickel salts	similar compounds	Sensitising

Respiratory Sensitisation

Name	Species	Value
Naphthenic acids, nickel salts	Professional judgement	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	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
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	In Vitro	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
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
Naphthenic acids, nickel salts	In Vitro	Some positive data exist, but the data are not sufficient for classification
Naphthenic acids, nickel salts	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
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
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
Naphthenic acids, nickel salts	Inhalation	similar compounds	Carcinogenic.

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	prematuring & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & 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
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	prematuring & 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
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
Naphthenic acids, nickel salts	Ingestion	Toxic to development	similar compounds	NOAEL not available	2 generation

Lactation

Name	Route	Species	Value
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xylene	Ingestion	Mouse	Not classified for effects on or via lactation
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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	
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	
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
Dipropylene glycol methyl ether 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	NOAEL 16.2 mg/l	9 days

				species		
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
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 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 immune system	Not classified	Rat	NOAEL 360 mg/kg/day	90 days
toluene	Inhalation	auditory system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
toluene	Inhalation	respiratory system	Some positive data exist, but the	Rat	LOAEL 2.3	15 months

			data are not sufficient for classification		mg/l	
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
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
Naphthenic acids, nickel salts	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	similar compounds	NOAEL not available	13 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.

3M Process Colour 884I, Yellow

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Dipropylene glycol methyl ether acetate	88917-22-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Rainbow trout	Experimental	96 hours	LC50	111 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Water flea	Experimental	48 hours	LC50	1,090 mg/l
Dipropylene glycol methyl ether acetate	88917-22-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
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	EC50	>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	Experimental	72 hours	EC50	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	Experimental	72 hours	EC10	3.56 mg/l
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	106276-80-6	Activated sludge	Estimated	30 minutes	EC50	>1,000 mg/l
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	106276-80-6		Data not available or insufficient for classification			N/A
Vinyl polymer	Trade Secret		Data not available or insufficient for classification			N/A
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
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL)-2,5-PYRROLIDINEDION	79720-19-7	Common Carp	Experimental	96 hours	LC50	0.097 mg/l

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n-butyl methacrylate	97-88-1	Bacteria	Experimental	18 hours	EC50	>254 mg/l
n-butyl methacrylate	97-88-1	Green Algae	Experimental	72 hours	EC50	31.2 mg/l
n-butyl methacrylate	97-88-1	Medaka	Experimental	96 hours	LC50	5.6 mg/l
n-butyl methacrylate	97-88-1	Water flea	Experimental	48 hours	EC50	25 mg/l
n-butyl methacrylate	97-88-1	Green Algae	Experimental	72 hours	NOEC	24.8 mg/l
n-butyl methacrylate	97-88-1	Water flea	Experimental	21 days	NOEC	1.1 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	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)
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	EC50	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
Naphthenic acids, nickel salts	61788-71-4	Common Carp	Estimated	96 hours	LC50	6.9 mg/l
Naphthenic acids, nickel salts	61788-71-4	Green Algae	Estimated	96 hours	EC50	0.034 mg/l
Naphthenic acids, nickel salts	61788-71-4	Water flea	Estimated	48 hours	EC50	0.069 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Dipropylene glycol methyl ether acetate	88917-22-0	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	90 %removal of DOC	OECD 301F - Manometric respirometry
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Biodegradation	28 days	BOD	87.2 % BOD/ThBOD	OECD 301C - MITI test (I)
cyclohexanone	108-94-1	Experimental Biodegradation	14 days	BOD	87 % BOD/ThBOD	OECD 301C - MITI test (I)

Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	106276-80-6	Estimated Biodegradation	28 days	BOD	3 % BOD/ThBOD	OECD 301C - MITI test (I)
Vinyl polymer	Trade Secret	Data not available - insufficient			N/A	
xylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
xylene	1330-20-7	Experimental Biodegradation	28 days	BOD	90-98 % BOD/ThBOD	OECD 301F - Manometric respirometry
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Experimental Biodegradation	28 days	CO2 evolution	0 % weight	OECD 301B - Modified sturm or CO2
n-butyl methacrylate	97-88-1	Experimental Biodegradation	28 days	BOD	88 % BOD/ThBOD	OECD 301C - MITI test (I)
toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 % BOD/ThBOD	APHA Std Meth Water/Wastewater
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Hydrolysis		Half-life (t 1/2)	9.9 days (t 1/2)	Non-standard method
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Biodegradation	28 days	BOD	11.6 % weight	OECD 301F - Manometric respirometry
Naphthenic acids, nickel salts	61788-71-4	Data not available - insufficient			N/A	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Dipropylene glycol methyl ether acetate	88917-22-0	Experimental Bioconcentration		Log Kow	0.61	Non-standard method
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Bioconcentration		Log Kow	0.36	Non-standard method
cyclohexanone	108-94-1	Experimental Bioconcentration		Log Kow	0.86	Non-standard method
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	106276-80-6	Estimated Bioconcentration		Bioaccumulation factor	35	Estimated: Bioconcentration factor
Vinyl polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
xylene	1330-20-7	Experimental BCF - Rainbow Trout	56 days	Bioaccumulation factor	25.9	
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) -2,5-PYRROLIDINEDIONE	79720-19-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
n-butyl methacrylate	97-88-1	Experimental Bioconcentration		Log Kow	2.88	Non-standard method
toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
2,3-Epoxypropyl neodecanoate	26761-45-5	Estimated Bioconcentration		Bioaccumulation factor	28	Estimated: Bioconcentration factor
Naphthenic acids, nickel salts	61788-71-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
3-DODECYL-1-(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL)-2,5-PYRROLIDINEDIONE	79720-19-7	Estimated Mobility in Soil	Koc	300 l/kg	ACD/Labs ChemSketch™
toluene	108-88-3	Experimental Mobility in Soil	Koc	37 l/kg	
2,3-Epoxypropyl neodecanoate	26761-45-5	Experimental Mobility in Soil	Koc	143 l/kg	OECD 121 Estim. of Koc by HPLC
Naphthenic acids, nickel salts	61788-71-4	Estimated Mobility in Soil	Koc	<3 l/kg	ACD/Labs ChemSketch™

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)

080312* Waste ink containing dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN 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	Not Environmentally Hazardous	Not applicable	Not a Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No Data Available	No Data Available
Control Temperature	No data available.	No Data Available	No Data Available
Emergency Temperature	No data available.	No Data Available	No Data Available
ADR Tunnel Code	(E)	Not Applicable	Not Applicable
ADR Classification Code	F1	Not Applicable	Not Applicable
ADR Transport Category	4	Not Applicable	Not Applicable
ADR Multiplier	0	0	0
IMDG Segregation Code	Not applicable.	Not Applicable	NONE
Transport not Permitted	Not applicable.	Not Applicable	Not Applicable

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

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
cyclohexanone	108-94-1	Gr. 3: Not classifiable	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

Restriction status: listed in REACH Annex XVII

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

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**

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.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.

Revision information:

EU Section 09: pH information information was added.

Professional Use of Coatings: Section 16: Annex information was modified.

CLP: Ingredient table information was added.

Label: CLP Classification information was modified.

Label: CLP Precautionary - Disposal information was deleted.

Label: CLP Precautionary - Prevention information was modified.

Label: CLP Precautionary - Response information was modified.

Label: Graphic information was modified.
Label: Signal Word information was modified.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: Substance not applicable information was added.
Section 04: First Aid - Symptoms and Effects (CLP) information was added.
Section 4: First aid for eye contact information information was modified.
Section 04: Information on toxicological effects information was modified.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Eye protection information information was deleted.
Section 8: Eye/face protection information information was added.
Section 8: Personal Protection - Eye information information was added.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Eye information information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive Hazards information information was deleted.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Reproductive/developmental effects information information was added.
Section 11: Respiratory Sensitization Table information was added.
Section 11: Respiratory Sensitization text information was deleted.
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: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: Mobility in soil information information was added.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.

Section 14 Hazardous/Not Hazardous for Transportation information was added.
 Section 14 Multiplier – Main Heading information was added.
 Section 14 Multiplier – Regulation Data information was added.
 Section 14 Other Dangerous Goods – Main Heading information was added.
 Section 14 Other Dangerous Goods – Regulation Data information was added.
 Section 14 Packing Group – Main Heading information was added.
 Section 14 Packing Group – Regulation Data information was added.
 Section 14 Proper Shipping Name information was added.
 Section 14 Regulations – Main Headings information was added.
 Section 14 Segregation – Regulation Data information was added.
 Section 14 Segregation Code – Main Heading information was added.
 Section 14 Special Precautions – Main Heading information was added.
 Section 14 Special Precautions – Regulation Data information was added.
 Section 14 Transport Category – Main Heading information was added.
 Section 14 Transport Category – Regulation Data information was added.
 Section 14 Transport in bulk – Regulation Data information was added.
 Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
 Section 14 Transport Not Permitted – Main Heading information was added.
 Section 14 Transport Not Permitted – Regulation Data information was added.
 Section 14 Tunnel Code – Main Heading information was added.
 Section 14 Tunnel Code – Regulation Data information was added.
 Section 14 UN Number Column data information was added.
 Section 14 UN Number information was added.
 Section 15: Carcinogenicity information information was modified.
 Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.
 information was modified.

Annex

1. Title	
Substance identification	2-methoxy-1-methylethyl acetate; EC No. 203-603-9; CAS Nbr 108-65-6;
Exposure Scenario Name	Professional Use of Coatings
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 10 -Roller application or brushing ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Processes, tasks and activities covered	Application of product with a roller or brush. Mixing or blending of solid or liquid materials. Transfer of substance/mixture with dedicated engineering controls.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Assumes use at not more than 20°C above ambient temperature; Duration of use: 8 hours/day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: None needed;

	Environmental: None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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