



Safety Data Sheet

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

1.1. Product identifier

3M™ Process Color 885N Black

Product Identification Numbers

75-0301-3622-2

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 Israel, 91 Medinat Ha'Yehudim Street, Herzeliya 46120
Telephone: 09-961 5000
E Mail: innovation.il@mmm.com
Website: www.3M.com/il

1.4. Emergency telephone number

09-961 5000

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	C.A.S. No.	EC No.	% by Wt
Hydrocarbons, C10 aromatics, <1% naphthalene		918-811-1	15 - 40
Cyclohexanone	108-94-1	203-631-1	5 - 10
Cumene	98-82-8	202-704-5	< 0.2

HAZARD STATEMENTS:

H226	Flammable liquid and vapor.
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 vapors.
P280G	Wear respiratory protection, eye protection, and 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 CENTER or doctor.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH208	Contains (3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE. N-Butyl Methacrylate. D-LIMONENE. May produce an allergic reaction.
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Supplemental Precautionary Statements:

Restricted to professional users.

15% of the mixture consists of components of unknown acute oral toxicity.

15% of the mixture consists of components of unknown acute dermal toxicity.

27% of the mixture consists of components of unknown acute inhalation toxicity.

Contains 15% 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
Heavy aromatic solvent naphtha (petroleum)	(CAS-No.) 64742-94-5 (EC-No.) 265-198-5	15 - 40	Aquatic Chronic 2, H411 Asp. Tox. 1, H304 STOT SE 3, H336 EUH066
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
Pine oil	(CAS-No.) 8002-09-3	7 - 13	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Cyclohexanone	(CAS-No.) 108-94-1 (EC-No.) 203-631-1	5 - 10	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
1-methoxy-2-propyl acetate	(CAS-No.) 108-65-	5 - 10	Flam. Liq. 3, H226

	6 (EC-No.) 203-603-9		STOT SE 3, H336
VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER	(CAS-No.) 25086-48-0	3 - 7	Substance not classified as hazardous
Light aromatic solvent naphtha (petroleum)	(CAS-No.) 64742-95-6 (EC-No.) 265-199-0	1 - 5	Asp. Tox. 1, H304 Nota P,P Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 3, H412
Carbon Black	(CAS-No.) 1333-86-4 (EC-No.) 215-609-9	1 - 5	Substance with a national occupational exposure limit
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	< 0.8	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 3, H412
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLA TE	(CAS-No.) 2386-87-0 (EC-No.) 219-207-4	< 0.5	Skin Sens. 1B, H317 Muta. 2, H341 STOT RE 2, H373
D-LIMONENE	(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,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,D
Naphthalene	(CAS-No.) 91-20-3 (EC-No.) 202-049-5	< 0.3	Acute Tox. 4, H302 Carc. 2, H351 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
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
Ethylbenzene	(CAS-No.) 100-41-4 (EC-No.) 202-849-4	< 0.2	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373

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. Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products**Substance**

Hydrocarbons

Carbon monoxide

Carbon dioxide

Hydrogen Chloride

Hydrogen Fluoride

Condition

During Combustion

During Combustion

During Combustion

During Combustion

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 vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes 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 authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not breathe thermal decomposition products. 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/vapors/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. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) 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 vapor 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 container tightly closed. Keep cool. Store away from acids. Store away from oxidizing 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	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin., Ototoxicant
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin, Ototoxicant
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcin., Danger of cutaneous absorption
Xylene	1330-20-7	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m ³	A3: Confirmed animal carcin.
Naphthalene	91-20-3	ACGIH	TWA:10 ppm	A3: Confirmed animal carcin., Danger of cutaneous absorption
1,2,4-TRIMETHYLBENZENE	95-63-6	ACGIH	TWA:10 ppm	A4: Not class. as human carcin
Cumene	98-82-8	ACGIH	TWA:5 ppm	A3: Confirmed animal carcin.

ACGIH : American Conference of Governmental Industrial Hygienists

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure

guidelines. 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/vapors/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

Skin/hand protection

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

Gloves made from the following material(s) are recommended: Polymer laminate

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:

For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use a positive pressure supplied-air respirator.

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Color	Black
Odor	Moderate Solvent
Odor threshold	No Data Available
Melting point/freezing point	Not Applicable
Boiling point/boiling range	>=140 °C
Flammability	Flammable Liquid: Category 3.
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Flash Point	52.2 °C [Test Method: Closed Cup]
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
pH	substance/mixture reacts with water
Kinematic Viscosity	1,010 mm ² /sec
Water solubility	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Vapor Pressure	<=493.3 Pa [@ 20 °C]

Density	0.99 g/ml [@ 20 °C]
Relative Density	0.99 [Ref Std: WATER=1]
Relative Vapor 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]

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 polymerization will not occur.

10.4. Conditions to avoid

Sparks and/or flames

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

Condition

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:

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 localized redness, swelling, itching, dryness, cracking, blistering, and pain. 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 diarrhea.

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-Vapor(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
Heavy aromatic solvent naphtha (petroleum)	Inhalation-Vapor	Professional judgement	LC50 estimated to be 20 - 50 mg/l
Hydrocarbons, C10 aromatics, <1% naphthalene	Inhalation-Vapor	Professional judgement	LC50 estimated to be 20 - 50 mg/l
Heavy aromatic solvent naphtha (petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrocarbons, C10 aromatics, <1% naphthalene	Dermal	Rabbit	LD50 > 2,000 mg/kg
Heavy aromatic solvent naphtha (petroleum)	Ingestion	Rat	LD50 > 5,000 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-propenoate and methyl 2-methyl-2-propenoate	Dermal		LD50 estimated to be > 5,000 mg/kg

2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Pine oil	Dermal	Rat	LD50 > 2,000 mg/kg
Pine oil	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.76 mg/l
Pine oil	Ingestion	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	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
1-methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-methoxy-2-propyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 28.8 mg/l
1-methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Cyclohexanone	Dermal	Rabbit	LD50 > 794, < 3160 mg/kg
Cyclohexanone	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER	Dermal	Rabbit	LD50 > 8,000 mg/kg
VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER	Ingestion	Rat	LD50 > 8,000 mg/kg
Light aromatic solvent naphtha (petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg
Light aromatic solvent naphtha (petroleum)	Inhalation-Vapor (4 hours)	Rat	LC50 > 5.2 mg/l
Light aromatic solvent naphtha (petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
1,2,4-TRIMETHYLBENZENE	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2,4-TRIMETHYLBENZENE	Inhalation-Vapor (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-Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Dermal	Rat	LD50 > 2,000 mg/kg
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.19 mg/l
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Ingestion	Rat	LD50 5,000 mg/kg
D-LIMONENE	Inhalation-Vapor (4 hours)	Mouse	LC50 > 3.14 mg/l
D-LIMONENE	Dermal	Rabbit	LD50 > 5,000 mg/kg
D-LIMONENE	Ingestion	Rat	LD50 4,400 mg/kg
Naphthalene	Dermal	Human	LD50 estimated to be 2,000 - 5,000 mg/kg
Naphthalene	Inhalation-Vapor	Human	LC50 estimated to be 20 - 50 mg/l
Naphthalene	Ingestion	Human	LD50 estimated to be 300 - 2,000 mg/kg
N-Butyl Methacrylate	Dermal	Rabbit	LD50 > 2,000 mg/kg
N-Butyl Methacrylate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 27 mg/l

N-Butyl Methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
Cumene	Dermal	Rabbit	LD50 > 3,160 mg/kg
Cumene	Inhalation-Vapor (4 hours)	Rat	LC50 39.4 mg/l
Cumene	Ingestion	Rat	LD50 2,260 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
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Heavy aromatic solvent naphtha (petroleum)	Rabbit	Minimal irritation
Hydrocarbons, C10 aromatics, <1% naphthalene	Rabbit	Minimal irritation
Pine oil	Rabbit	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	Irritant
1-methoxy-2-propyl acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Irritant
VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER	Professional judgement	No significant irritation
Light aromatic solvent naphtha (petroleum)	Rabbit	Irritant
Carbon Black	Rabbit	No significant irritation
1,2,4-TRIMETHYLBENZENE	Rabbit	Irritant
Xylene	Rabbit	Mild irritant
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Rabbit	Minimal irritation
D-LIMONENE	Rabbit	Irritant
Naphthalene	Rabbit	Minimal irritation
N-Butyl Methacrylate	Rabbit	Irritant
Ethylbenzene	Rabbit	Mild irritant
Cumene	Rabbit	Minimal irritation
GLYCOLIC ACID, BUTYL ESTER	Rabbit	No significant irritation
Toluene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Heavy aromatic solvent naphtha (petroleum)	Rabbit	Mild irritant
Hydrocarbons, C10 aromatics, <1% naphthalene	Rabbit	Mild irritant
Pine oil	Rabbit	Moderate 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
1-methoxy-2-propyl acetate	Rabbit	Mild irritant
Cyclohexanone	In vitro data	Corrosive

VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER	Professional judgement	No significant irritation
Light aromatic solvent naphtha (petroleum)	Rabbit	Mild irritant
Carbon Black	Rabbit	No significant irritation
1,2,4-TRIMETHYLBENZENE	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Rabbit	Mild irritant
D-LIMONENE	Rabbit	Mild irritant
Naphthalene	Rabbit	No significant irritation
N-Butyl Methacrylate	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
Cumene	Rabbit	Mild irritant
GLYCOLIC ACID, BUTYL ESTER	Rabbit	Corrosive
Toluene	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Heavy aromatic solvent naphtha (petroleum)	Guinea pig	Not classified
Hydrocarbons, C10 aromatics, <1% naphthalene	Guinea pig	Not classified
Pine oil	Human and animal	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
1-methoxy-2-propyl acetate	Guinea pig	Not classified
Cyclohexanone	Guinea pig	Not classified
Light aromatic solvent naphtha (petroleum)	Guinea pig	Not classified
1,2,4-TRIMETHYLBENZENE	Guinea pig	Not classified
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Guinea pig	Sensitizing
D-LIMONENE	Mouse	Sensitizing
N-Butyl Methacrylate	Guinea pig	Sensitizing
Ethylbenzene	Human	Not classified
Cumene	Guinea pig	Not classified
GLYCOLIC ACID, BUTYL ESTER	Guinea pig	Not classified
Toluene	Guinea pig	Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Heavy aromatic solvent naphtha (petroleum)	In Vitro	Not mutagenic
Heavy aromatic solvent naphtha (petroleum)	In vivo	Not mutagenic
Hydrocarbons, C10 aromatics, <1% naphthalene	In Vitro	Not mutagenic
Hydrocarbons, C10 aromatics, <1% naphthalene	In vivo	Not mutagenic
Pine oil	In Vitro	Not mutagenic
Reaction mass of α,α -4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α -4-	In Vitro	Not mutagenic

trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol		
1-methoxy-2-propyl acetate	In Vitro	Not mutagenic
Cyclohexanone	In Vitro	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
1,2,4-TRIMETHYLBENZENE	In Vitro	Not mutagenic
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	In Vitro	Some positive data exist, but the data are not sufficient for classification
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	In vivo	Some positive data exist, but the data are not sufficient for classification
D-LIMONENE	In Vitro	Not mutagenic
D-LIMONENE	In vivo	Not mutagenic
N-Butyl Methacrylate	In Vitro	Not mutagenic
N-Butyl Methacrylate	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Cumene	In Vitro	Not mutagenic
Cumene	In vivo	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Light aromatic solvent naphtha (petroleum)	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	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
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Dermal	Mouse	Not carcinogenic
D-LIMONENE	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Naphthalene	Inhalation	Multiple animal species	Carcinogenic
N-Butyl Methacrylate	Inhalation	Multiple animal species	Carcinogenic
Ethylbenzene	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
Heavy aromatic solvent naphtha (petroleum)	Not Specified	Not classified for female reproduction	Rat	NOAEL Not available	2 generation
Heavy aromatic solvent naphtha (petroleum)	Not Specified	Not classified for male reproduction	Rat	NOAEL Not available	2 generation
Heavy aromatic solvent naphtha (petroleum)	Not Specified	Not classified for development	Rat	NOAEL Not available	2 generation
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
Pine oil	Ingestion	Not classified for development	Rat	NOAEL 600 mg/kg/day	during gestation
Pine oil	Ingestion	Not classified for female reproduction	Rat	NOAEL 250 mg/kg/day	premating into lactation
Pine oil	Ingestion	Toxic to male reproduction	Rat	NOAEL 250 mg/kg/day	5 weeks
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
1-methoxy-2-propyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-methoxy-2-propyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-methoxy-2-propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-methoxy-2-propyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis
Cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Ingestion	Not classified for development	Rabbit	NOAEL 500 mg/kg/day	during gestation
Cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2.6 mg/l	during gestation
Light aromatic solvent naphtha (petroleum)	Inhalation	Not classified for female reproduction	Rat	NOAEL 1,500 ppm	2 generation
Light aromatic solvent naphtha (petroleum)	Inhalation	Not classified for male reproduction	Rat	NOAEL 1,500 ppm	2 generation
Light aromatic solvent naphtha (petroleum)	Inhalation	Not classified for development	Rat	NOAEL 500 ppm	2 generation
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
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	Ingestion	Not classified for development	Rat	NOAEL 125 mg/kg/day	during gestation
D-LIMONENE	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	premating & during gestation
D-LIMONENE	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
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation
Cumene	Inhalation	Not classified for development	Rabbit	NOAEL 11.3 mg/l	during organogenesis
GLYCOLIC ACID, BUTYL ESTER	Ingestion	Toxic to development	Rat	NOAEL 250 mg/kg/day	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

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
Heavy aromatic solvent naphtha (petroleum)	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrocarbons, C10 aromatics, <1% naphthalene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Pine oil	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
Reaction mass of α,α -4-trimethyl-(1S)-3-	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	similar health	NOAEL not available	

cyclohexene-1-methanol and α,α -4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol			classification	hazards		
1-methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
1-methoxy-2-propyl 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	May cause respiratory irritation	Human	NOAEL Not available	
Cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Light aromatic solvent naphtha (petroleum)	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Light aromatic solvent naphtha (petroleum)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Professional judgement	NOAEL Not available	
Light aromatic solvent naphtha (petroleum)	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	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
D-LIMONENE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
D-LIMONENE	Ingestion	nervous system	Not classified		NOAEL Not available	
Naphthalene	Ingestion	blood	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
N-Butyl Methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	

Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	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
GLYCOLIC ACID, BUTYL ESTER	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	NOAEL 0.4 mg/l	4 hours
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
Pine oil	Inhalation	hematopoietic system eyes respiratory system	Not classified	Rat	NOAEL 2.23 mg/l	13 weeks
Pine oil	Ingestion	liver kidney and/or bladder heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system immune system muscles nervous system respiratory system	Not classified	Rat	NOAEL 750 mg/kg/day	5 weeks
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-cyclohexene-1-methanol and α,α -4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	Ingestion	liver kidney and/or bladder heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system immune system muscles nervous system respiratory system	Not classified	Rat	NOAEL 750 mg/kg/day	5 weeks
1-methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
1-methoxy-2-propyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
1-methoxy-2-propyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days

1-methoxy-2-propyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Cyclohexanone	Inhalation	liver kidney and/or bladder heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system immune system muscles nervous system eyes respiratory system vascular system	Not classified	Rat	NOAEL 2.5 mg/l	13 weeks
Cyclohexanone	Ingestion	hematopoietic system eyes kidney and/or bladder	Not classified	Rat	NOAEL 407 mg/kg/day	3 months
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
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 system	Not classified	Rat	NOAEL 600 mg/kg/day	14 days
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,	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks

		and/or hair hematopoietic system immune system nervous system respiratory system				
(3',4'-EPOXYCYCLOHEXYL METHYL) 3,4-EPOXYCYCLOHEXANE CARBOXYLATE	Ingestion	olfactory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 50 mg/kg/day	91 days
(3',4'-EPOXYCYCLOHEXYL METHYL) 3,4-EPOXYCYCLOHEXANE CARBOXYLATE	Ingestion	liver kidney and/or bladder heart skin endocrine system gastrointestinal tract hematopoietic system immune system nervous system eyes respiratory system vascular system	Not classified	Rat	NOAEL 500 mg/kg/day	91 days
D-LIMONENE	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 75 mg/kg/day	103 weeks
D-LIMONENE	Ingestion	liver	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
D-LIMONENE	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
Naphthalene	Dermal	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Dermal	eyes	Not classified	Human	NOAEL Not available	occupational exposure
Naphthalene	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.01 mg/l	13 weeks
Naphthalene	Inhalation	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Inhalation	eyes	Not classified	Human	NOAEL Not available	occupational exposure
Naphthalene	Ingestion	blood	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Naphthalene	Ingestion	eyes	May cause damage to organs though prolonged or repeated exposure	Rabbit	LOAEL 500 mg/kg/day	15 days
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

Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart immune system respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
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
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
Toluene	Inhalation	auditory system nervous system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks

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

Aspiration Hazard

Name	Value
Heavy aromatic solvent naphtha (petroleum)	Aspiration hazard
Hydrocarbons, C10 aromatics, <1% naphthalene	Aspiration hazard
Light aromatic solvent naphtha (petroleum)	Aspiration hazard
1,2,4-TRIMETHYLBENZENE	Aspiration hazard
Xylene	Aspiration hazard
D-LIMONENE	Aspiration hazard
Ethylbenzene	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
Heavy aromatic solvent naphtha (petroleum)	64742-94-5	Green algae	Estimated	72 hours	EL50	1 mg/l
Heavy aromatic solvent naphtha (petroleum)	64742-94-5	Rainbow Trout	Estimated	96 hours	LL50	2 mg/l
Heavy aromatic solvent naphtha (petroleum)	64742-94-5	Water flea	Estimated	48 hours	EL50	3 mg/l
Heavy aromatic solvent naphtha (petroleum)	64742-94-5	Green algae	Estimated	72 hours	NOEL	1 mg/l
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
Pine oil	8002-09-3	Green algae	Experimental	72 hours	EC50	68 mg/l
Pine oil	8002-09-3	Water flea	Experimental	48 hours	EC50	73 mg/l
Pine oil	8002-09-3	Zebra Fish	Experimental	96 hours	LC50	62-80 mg/l
Pine oil	8002-09-3	Green algae	Experimental	72 hours	NOEC	3.9 mg/l
Pine oil	8002-09-3	N/A	Experimental	14 days	LC50	499-799 mg/kg (Dry Weight)
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-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol	701-188-3	Zebra Fish	Experimental	96 hours	LC50	62-80 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	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)
1-methoxy-2-propyl acetate	108-65-6	Activated sludge	Experimental	30 minutes	EC10	>1,000 mg/l
1-methoxy-2-propyl acetate	108-65-6	Green algae	Experimental	72 hours	ErC50	>1,000 mg/l
1-methoxy-2-propyl acetate	108-65-6	Rainbow Trout	Experimental	96 hours	LC50	134 mg/l
1-methoxy-2-propyl acetate	108-65-6	Water flea	Experimental	48 hours	EC50	370 mg/l

1-methoxy-2-propyl acetate	108-65-6	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
1-methoxy-2-propyl 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
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
Carbon Black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon Black	1333-86-4	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon Black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Carbon Black	1333-86-4	Activated sludge	Experimental	3 hours	NOEC	>800 mg/l
Light aromatic solvent naphtha (petroleum)	64742-95-6	Fathead Minnow	Estimated	96 hours	LL50	8.2 mg/l
Light aromatic solvent naphtha (petroleum)	64742-95-6	Green algae	Estimated	72 hours	EL50	7.9 mg/l
Light aromatic solvent naphtha (petroleum)	64742-95-6	Water flea	Estimated	48 hours	EL50	3.2 mg/l
Light aromatic solvent naphtha (petroleum)	64742-95-6	Green algae	Estimated	72 hours	NOEL	0.22 mg/l
Light aromatic solvent naphtha (petroleum)	64742-95-6	Water flea	Experimental	21 days	NOEL	2.6 mg/l
1,2,4-TRIMETHYLBENZE NE	95-63-6	Fathead Minnow	Experimental	96 hours	LC50	7.72 mg/l
1,2,4-TRIMETHYLBENZE NE	95-63-6	Mysid Shrimp	Experimental	96 hours	LC50	2 mg/l
1,2,4-TRIMETHYLBENZE NE	95-63-6	Water flea	Experimental	48 hours	LC50	3.6 mg/l
1,2,4-TRIMETHYLBENZE NE	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	Rainbow Trout	Estimated	56 days	NOEC	>1.3 mg/l
Xylene	1330-20-7	Water flea	Estimated	7 days	NOEC	0.96 mg/l
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	2386-87-0	Activated sludge	Experimental	3 hours	EC50	>2,000 mg/l

(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	2386-87-0	Green algae	Experimental	72 hours	ErC50	>110 mg/l
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	2386-87-0	Rainbow Trout	Experimental	96 hours	LC50	24 mg/l
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	2386-87-0	Water flea	Experimental	48 hours	EC50	40 mg/l
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANECARBOXYLATE	2386-87-0	Green algae	Experimental	72 hours	NOEC	30 mg/l
D-LIMONENE	5989-27-5	Fathead Minnow	Experimental	96 hours	LC50	0.702 mg/l
D-LIMONENE	5989-27-5	Green algae	Experimental	72 hours	ErC50	0.32 mg/l
D-LIMONENE	5989-27-5	Water flea	Experimental	48 hours	EC50	0.307 mg/l
D-LIMONENE	5989-27-5	Fathead Minnow	Experimental	8 days	EC10	0.32 mg/l
D-LIMONENE	5989-27-5	Green algae	Experimental	72 hours	ErC10	0.174 mg/l
D-LIMONENE	5989-27-5	Water flea	Experimental	21 days	NOEC	0.153 mg/l
Naphthalene	91-20-3	Diatom	Experimental	72 hours	EbC50	0.4 mg/l
Naphthalene	91-20-3	Invertebrate	Experimental	96 hours	LC50	2.35 mg/l
Naphthalene	91-20-3	Rainbow Trout	Experimental	96 hours	LC50	0.11 mg/l
Naphthalene	91-20-3	Water flea	Experimental	48 hours	EC50	1.6 mg/l
Naphthalene	91-20-3	Coho salmon	Experimental	40 days	NOEC	0.37 mg/l
Naphthalene	91-20-3	Duckweed	Experimental	8 days	NOEC	16 mg/l
Naphthalene	91-20-3	Invertebrate	Experimental	21 days	NOEC	0.5 mg/l
Naphthalene	91-20-3	Pink Salmon	Experimental	40 days	NOEC	0.12 mg/l
Naphthalene	91-20-3	Bacteria	Experimental	24 hours	IC50	29 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
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
Ethylbenzene	100-41-4	Green algae	Estimated	73 hours	EC50	4.36 mg/l
Ethylbenzene	100-41-4	Rainbow Trout	Estimated	96 hours	LC50	2.6 mg/l
Ethylbenzene	100-41-4	Water flea	Estimated	48 hours	EC50	3.82 mg/l
Ethylbenzene	100-41-4	Activated sludge	Experimental	49 hours	EC50	130 mg/l
Ethylbenzene	100-41-4	Green algae	Estimated	73 hours	NOEC	0.44 mg/l
Ethylbenzene	100-41-4	Rainbow Trout	Estimated	56 days	NOEC	>1.3 mg/l
Ethylbenzene	100-41-4	Water flea	Estimated	7 days	NOEC	0.96 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 No.	Test Type	Duration	Study Type	Test Result	Protocol
Heavy aromatic solvent naphtha (petroleum)	64742-94-5	Experimental Biodegradation	28 days	Biological Oxygen Demand	49.6 %BOD/Th OD	OECD 301F - Manometric Respiro
Hydrocarbons, C10 aromatics, <1% naphthalene	918-811-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	49.6 %BOD/C OD	OECD 301F - Manometric Respiro

2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	28262-63-7	Data not available - insufficient	N/A	N/A	N/A	N/A
Pine oil	8002-09-3	Experimental Biodegradation	28 days	Carbon dioxide evolution	80 %CO ₂ evolution/THC O ₂ evolution	OECD 310 CO ₂ Headspace
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	Carbon dioxide evolution	80 %CO ₂ evolution/THC O ₂ evolution	OECD 310 CO ₂ Headspace
1-methoxy-2-propyl acetate	108-65-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	87.2 %BOD/ThOD	OECD 301C - MITI (I)
1-methoxy-2-propyl 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	Biological Oxygen Demand	87 %BOD/ThOD	OECD 301C - MITI (I)
VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER	25086-48-0	Data not available - insufficient	N/A	N/A	N/A	N/A
Carbon Black	1333-86-4	Data not available - insufficient	N/A	N/A	N/A	N/A
Light aromatic solvent naphtha (petroleum)	64742-95-6	Estimated Biodegradation	28 days	Biological Oxygen Demand	78 %BOD/CO ₂ D	OECD 301F - Manometric Respiro
1,2,4-TRIMETHYLBENZENE	95-63-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	>60 %BOD/ThOD	OECD 301F - Manometric Respiro
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	Biological Oxygen Demand	90-98 %BOD/ThOD	OECD 301F - Manometric Respiro
Xylene	1330-20-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANE CARBOXYLATE	2386-87-0	Experimental Biodegradation	28 days	Carbon dioxide evolution	71 %CO ₂ evolution/THC O ₂ evolution (does not pass 10-day window)	OECD 301B - Mod. Sturm or CO ₂
(3',4'-EPOXYCYCLOHEXYLMETHYL) 3,4-EPOXYCYCLOHEXANE CARBOXYLATE	2386-87-0	Experimental Hydrolysis		Hydrolytic half-life	47 hours (t 1/2)	OECD 111 Hydrolysis function of pH
D-LIMONENE	5989-27-5	Experimental Biodegradation	14 days	Biological Oxygen Demand	98 %BOD/ThOD	OECD 301C - MITI (I)
D-LIMONENE	5989-27-5	Experimental Biodegradation	14 days	Dissolv. Organic Carbon Deplet	>93.8 %removal of DOC	OECD 303A - Simulated Aerobic
Naphthalene	91-20-3	Experimental Biodegradation	14 days	Carbon dioxide evolution	>99 %CO ₂ evolution/THC O ₂ evolution	
Naphthalene	91-20-3	Experimental Biodegradation	28 days	Biological Oxygen Demand	>74 %BOD/ThOD	OECD 301C - MITI (I)
Naphthalene	91-20-3	Experimental Aquatic Inherent Biodegrad.	28 days	Biological Oxygen Demand	2 %BOD/ThOD	similar to OECD 302C
Naphthalene	91-20-3	Experimental Photolysis		Photolytic half-life (in air)	1.2 days (t 1/2)	
Naphthalene	91-20-3	Experimental Soil Metabolism Aerobic	10 days	Percent degraded	90 %degraded	
N-Butyl Methacrylate	97-88-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	88 %BOD/ThOD	OECD 301C - MITI (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
Cumene	98-82-8	Experimental Biodegradation	14 days	Biological Oxygen Demand	33 %BOD/ThO D	OECD 301C - MITI (I)
Cumene	98-82-8	Experimental Photolysis		Photolytic half-life (in air)	4.5 days (t 1/2)	
Ethylbenzene	100-41-4	Experimental Biodegradation	28 days	Biological Oxygen Demand	90-98 %BOD/ThO D	OECD 301F - Manometric Respiro
GLYCOLIC ACID, BUTYL ESTER	7397-62-8	Experimental Biodegradation	28 days	Carbon dioxide evolution	81 %CO2 evolution/THC O2 evolution	OECD 301B - Mod. Sturm or CO2
Toluene	108-88-3	Experimental Biodegradation	20 days	Biological Oxygen Demand	80 %BOD/ThO D	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
Heavy aromatic solvent naphtha (petroleum)	64742-94-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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
Pine oil	8002-09-3	Analogous Compound Bioconcentration		Log of Octanol/H2O part. coeff	2.78	
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 of Octanol/H2O part. coeff	2.78	
1-methoxy-2-propyl acetate	108-65-6	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.36	OECD 107 log Kow shke flask mtd
Cyclohexanone	108-94-1	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.86	OECD 107 log Kow shke flask mtd
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
Carbon Black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Light aromatic solvent naphtha (petroleum)	64742-95-6	Estimated BCF - Fish	42 days	Bioaccumulation Factor	598	OECD305-Bioconcentration
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 of Octanol/H2O part. coeff	3.63	
Xylene	1330-20-7	Experimental BCF - Fish	56 days	Bioaccumulation Factor	25.9	

(3',4'-EPOXYCYCLOHEXYLM ETHYL) 3,4-EPOXYCYCLOHEXANE CARBOXYLATE	2386-87-0	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	1.34	OECD 107 log Kow shke flask mtd
D-LIMONENE	5989-27-5	Modeled Bioconcentration		Bioaccumulation Factor	2100	Catalogic™
D-LIMONENE	5989-27-5	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	4.57	
Naphthalene	91-20-3	Experimental BCF - Fish	56 days	Bioaccumulation Factor	≤168	OECD305-Bioconcentration
Naphthalene	91-20-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.7	OECD 117 log Kow HPLC method
N-Butyl Methacrylate	97-88-1	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.03	OECD 107 log Kow shke flask mtd
Cumene	98-82-8	Modeled Bioconcentration		Bioaccumulation Factor	140	Catalogic™
Cumene	98-82-8	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	3.55	OECD 107 log Kow shke flask mtd
Ethylbenzene	100-41-4	Experimental BCF - Fish	56 days	Bioaccumulation Factor	25.9	
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 of Octanol/H2O part. coeff	2.73	

12.4. Mobility in soil

Material	Cas No.	Test Type	Study Type	Test Result	Protocol
Pine oil	8002-09-3	Modeled Mobility in Soil	Koc	212.8 l/kg	Episuite™
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™
1-methoxy-2-propyl 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™
1,2,4-TRIMETHYLBENZENE	95-63-6	Modeled Mobility in Soil	Koc	1,400 l/kg	Episuite™
Xylene	1330-20-7	Estimated Mobility in Soil	Koc	537 l/kg	OECD 121 Estim. of Koc by HPLC
(3',4'-EPOXYCYCLOHEXYLM ETHYL) 3,4-EPOXYCYCLOHEXANE CARBOXYLATE	2386-87-0	Modeled Mobility in Soil	Koc	26 l/kg	Episuite™
D-LIMONENE	5989-27-5	Modeled Mobility in Soil	Koc	9,245 l/kg	Episuite™
Naphthalene	91-20-3	Experimental Mobility in Soil	Koc	378 l/kg	
N-Butyl Methacrylate	97-88-1	Analogous Compound Mobility in Soil	Koc	1,480 l/kg	OECD 106 Adsp-Desb Batch Equil
Cumene	98-82-8	Modeled Mobility	Koc	700	Episuite™

		in Soil			
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/CE 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)

080111* Waste paint and varnish containing organic solvents or other 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

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>	<u>Regulation</u>
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
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
D-LIMONENE	5989-27-5	Gr. 3: Not classifiable	International Agency for Research on Cancer
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Naphthalene	91-20-3	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
Naphthalene	91-20-3	Grp. 2B: Possible human carc.	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

Toluene

C.A.S. No.

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

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

SECTION 16: Other information**List of relevant H statements**

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
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.

H351	Suspected of causing 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.
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:

Section 02: CLP Ingredient table information was modified.
Section 02: Label Elements: CLP Percent Unknown information was modified.
Section 02: Label Elements: CLP Precautionary - Prevention information was modified.
Section 02: Label Elements: CLP Precautionary - Response information was modified.
Section 02: List of sensitizers information was modified.
Section 03: Composition/ Information of ingredients table information was modified.
Section 04: First Aid - Symptoms and Effects (CLP) information was modified.
Section 05: Hazardous combustion products table information was modified.
Section 06: Accidental release personal information information was modified.
Section 07: Conditions safe storage information was modified.
Section 08: Occupational exposure limit table information was modified.
Section 09: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Odor information was modified.
Section 09: Particle Characteristics N/A information was added.
Section 10: Hazardous Decomposition Products information information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: 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 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 14 Other Dangerous Goods – Regulation Data information was modified.
Section 14 Proper Shipping Name information was modified.
Section 15: Carcinogenicity information information was modified.
Section 15: Seveso Substance Text information was deleted.
Section 16: Two-column table displaying the unique list of H Codes and statements (std phrses) for all components of the given material. information was modified.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M Israel SDSs are available at www.3M.com/il