Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

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

1.1. Product identifier
3M Scotch-Weld™ Fuel Resistant Coating EC-776SR

Product Identification Numbers
62-1541-6540-1

7100008736

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

Identified uses
Coating.

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
E Mail:	tox.uk@mmm.com
Website:	www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

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 2 - Flam. Liq. 2; H225
Acute Toxicity, Category 4 - Acute Tox. 4; H332
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Carcinogenicity, Category 2 - Carc. 2; H351
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

2.2. Label elements
The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

SIGNAL WORD
DANGER.

Symbols
GHS02 (Flame) |GHS05 (Corrosion) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |

Pictograms

Ingredient	CAS Nbr	EC No.	% by Wt
4-methylpentan-2-one	108-10-1	203-550-1	60 - 100
phenol	108-95-2	203-632-7	0.5 - 2
mix-cresol	1319-77-3	215-293-2	0.1 - 1.5

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H336	May cause drowsiness or dizziness.
H412	Harmful 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.
P261E	Avoid breathing vapour or spray.
P280I	Wear protective gloves, eye protection, face protection, and respiratory 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 2,5-Di-tert-pentylhydroquinone. May produce an allergic reaction.

1% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 11% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for GB
4-methylpentan-2-one	(CAS-No.) 108-10-1 (EC-No.) 203-550-1	60 - 100	Flam. Liq. 2, H225 Acute Tox. 4, H332(LC50 = 11 mg/l **ATE values per GB MCL**) Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066
Acrylonitrile - butadiene polymer	(CAS-No.) 9003-18-3	5 - 15	Substance not classified as hazardous
Cresol-formaldehyde-phenol polymer	(CAS-No.) 9039-25-2	7 - 13	Substance not classified as hazardous
toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9	<= 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
phenol	(CAS-No.) 108-95-2 (EC-No.) 203-632-7	0.5 - 2	Acute Tox. 3, H331 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1B, H314 Muta. 2, H341 STOT RE 2, H373 Aquatic Chronic 2, H411
butanone	(CAS-No.) 78-93-3 (EC-No.) 201-159-0	<= 1.5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

			EUH066
mix-cresol	(CAS-No.) 1319-77-3 (EC-No.) 215-293-2	0.1 - 1.5	Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1B, H314 Nota C Eye Dam. 1, H318 Aquatic Chronic 3, H412
cyclohexane	(CAS-No.) 110-82-7 (EC-No.) 203-806-2	<= 0.99	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
2,5-Di-tert-pentylhydroquinone	(CAS-No.) 79-74-3 (EC-No.) 201-222-2	< 0.1	Acute Tox. 4, H302 Skin Sens. 1A, H317 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

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
phenol	(CAS-No.) 108-95-2 (EC-No.) 203-632-7	(C >= 3%) Skin Corr. 1B, H314 (1% =< C < 3%) Skin Irrit. 2, H315 (1% =< C < 3%) Eye Irrit. 2, H319

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 GB CLP classification include:
Harmful if inhaled. Irritation to the skin (localized redness, swelling, itching, and dryness). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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

SECTION 5: Fire-fighting measures

5.1. Extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
formaldehyde	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.

5.3. Advice for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Cover spill area with a fire-extinguishing foam. 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. Avoid release to the environment. 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 container tightly closed. Keep cool. 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
4-methylpentan-2-one	108-10-1	UK HSE	TWA:208 mg/m3(50 ppm);STEL:416 mg/m3(100 ppm)	SKIN
toluene	108-88-3	UK HSE	TWA: 191 mg/m³ (50 ppm); STEL: 384 mg/m³ (100 ppm)	SKIN
phenol	108-95-2	UK HSE	TWA:7.8 mg/m3(2 ppm);STEL:16 mg/m3(4 ppm)	SKIN
cyclohexane	110-82-7	UK HSE	TWA:350 mg/m³(100 ppm);STEL:1050 mg/m³(300 ppm)	
butanone	78-93-3	UK HSE	TWA: 600 mg/m³ (200 ppm); STEL: 899 mg/m³ (300 ppm)	SKIN

UK HSE : 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
4-methylpentan-2-one	108-10-1	UK EH40 BMGVs	4-Methyl pentan-2-one	Urine	EOS	20 umol/L	
butanone	78-93-3	UK EH40 BMGVs	Butan-2-one	Urine	EOS	70 umol/L	

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)
EOS: End of shift.

8.2. Exposure controls

8.2.1. Engineering controls
Provide appropriate local exhaust ventilation on open containers. Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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

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 vapors and particulates, including oily mists

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Red
Odor	Strong Methyl isobutyl ketone
Odour threshold	*No data available.*

Melting point/freezing point	*No data available.*
Boiling point/boiling range	117.8 ºC [@ 101,325 Pa] [*Test Method:*Estimated] [*Details:*Based on MIBK]
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	1.2 % volume [@ 200 ºC] [*Test Method:*Estimated]
Flammable Limits(UEL)	8 % volume [@ 93.3 ºC] [*Test Method:*Estimated]
Flash point	17.8 ºC [@ 101,325 Pa] [*Test Method:*Closed Cup]
Autoignition temperature	448.9 ºC [*Test Method:*Estimated]
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	494 mm²/sec
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	2,133.2 Pa [@ 20 ºC] [*Test Method:*Estimated]
Density	0.86 g/ml [@ 20 ºC]
Relative density	0.86 [*Ref Std:*WATER=1]
Relative Vapour Density	approximately 3.5 [*Ref Std:*AIR=1]
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	approximately 4 Units not available or not applicable. [*Ref Std:*ETHER=1]
Molecular weight	*No data available.*
Percent volatile	84 %

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Sparks and/or flames.

10.5 Incompatible materials
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the 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 3M assessments.

11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
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
Skin Irritation: Signs/symptoms may include localised 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 diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Cardiac effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Hematopoietic effects: Signs/symptoms may include generalised weakness, fatigue and alterations in numbers of circulating blood cells. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Prolonged or repeated exposure may cause target organ effects:
Ocular effects: Signs/symptoms may include blurred or significantly impaired vision. Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Cardiac effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Hematopoietic effects: Signs/symptoms may include generalised weakness, fatigue and alterations in numbers of circulating blood cells. Liver effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Olfactory effects: Signs/symptoms may include decreased ability to detect odours and complete loss of smell. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish

coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

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 >10 - =20 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
4-methylpentan-2-one	Dermal	Rabbit	LD50 > 16,000 mg/kg
4-methylpentan-2-one	Inhalation-Vapour (4 hours)	Rat	LC50 11 mg/l
4-methylpentan-2-one	Ingestion	Rat	LD50 3,038 mg/kg
Cresol-formaldehyde-phenol polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Cresol-formaldehyde-phenol polymer	Inhalation-Dust/Mist		LC50 estimated to be > 12.5 mg/l
Cresol-formaldehyde-phenol polymer	Ingestion		LD50 estimated to be > 5,000 mg/kg
Acrylonitrile - butadiene polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile - butadiene polymer	Ingestion	Rat	LD50 > 30,000 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
butanone	Dermal	Rabbit	LD50 > 8,050 mg/kg
butanone	Inhalation-Vapour (4 hours)	Rat	LC50 34.5 mg/l
butanone	Ingestion	Rat	LD50 2,737 mg/kg
phenol	Inhalation-Vapour		LC50 estimated to be 2 - 10 mg/l
phenol	Dermal	Rat	LD50 670 mg/kg
phenol	Ingestion	Rat	LD50 340 mg/kg
mix-cresol	Dermal	Rat	LD50 620 mg/kg
mix-cresol	Ingestion	Rat	LD50 242 mg/kg
cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
cyclohexane	Inhalation-Vapour (4 hours)	Rat	LC50 > 32.9 mg/l
cyclohexane	Ingestion	Rat	LD50 6,200 mg/kg
2,5-Di-tert-pentylhydroquinone	Dermal	Rabbit	LD50 > 3,160 mg/kg
2,5-Di-tert-pentylhydroquinone	Ingestion	Rat	LD50 1,900 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

4-methylpentan-2-one	Rabbit	Mild irritant
Cresol-formaldehyde-phenol polymer	Professional judgement	No significant irritation
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
toluene	Rabbit	Irritant
butanone	Rabbit	Minimal irritation
phenol	Rat	Corrosive
mix-cresol	Rabbit	Corrosive
cyclohexane	Rabbit	Mild irritant
2,5-Di-tert-pentylhydroquinone	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
4-methylpentan-2-one	Rabbit	Mild irritant
Cresol-formaldehyde-phenol polymer	Professional judgement	Mild irritant
Acrylonitrile - butadiene polymer	Professional judgement	No significant irritation
toluene	Rabbit	Moderate irritant
butanone	Rabbit	Severe irritant
phenol	Rabbit	Corrosive
mix-cresol	similar health hazards	Corrosive
cyclohexane	Rabbit	Mild irritant
2,5-Di-tert-pentylhydroquinone	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
4-methylpentan-2-one	Guinea pig	Not classified
toluene	Guinea pig	Not classified
phenol	Guinea pig	Not classified
2,5-Di-tert-pentylhydroquinone	Mouse	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
4-methylpentan-2-one	In Vitro	Not mutagenic
toluene	In Vitro	Not mutagenic
toluene	In vivo	Not mutagenic
butanone	In Vitro	Not mutagenic
phenol	In Vitro	Some positive data exist, but the data are not sufficient for classification
phenol	In vivo	Some positive data exist, but the data are not sufficient for classification
mix-cresol	In vivo	Not mutagenic

mix-cresol	In Vitro	Some positive data exist, but the data are not sufficient for classification
cyclohexane	In Vitro	Not mutagenic
cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
2,5-Di-tert-pentylhydroquinone	In vivo	Not mutagenic
2,5-Di-tert-pentylhydroquinone	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
4-methylpentan-2-one	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
butanone	Inhalation	Human	Not carcinogenic
phenol	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
phenol	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
mix-cresol	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
mix-cresol	Ingestion	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
4-methylpentan-2-one	Inhalation	Not classified for female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-methylpentan-2-one	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-methylpentan-2-one	Inhalation	Not classified for male reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-methylpentan-2-one	Inhalation	Not classified for development	Mouse	NOAEL 12.3 mg/l	during organogenesis
toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
butanone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
phenol	Ingestion	Not classified for female reproduction	Rat	NOAEL 321 mg/kg/day	2 generation
phenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 321 mg/kg/day	2 generation
phenol	Ingestion	Not classified for development	Rat	NOAEL 120 mg/kg/day	during organogenesis
mix-cresol	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	2 generation
mix-cresol	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	2 generation

mix-cresol	Ingestion	Not classified for development	Rat	NOAEL 175 mg/kg/day	during organogenesis
cyclohexane	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation
cyclohexane	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation
cyclohexane	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation
2,5-Di-tert-pentylhydroquinone	Ingestion	Not classified for development	Rat	NOAEL 70 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4-methylpentan-2-one	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
4-methylpentan-2-one	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
4-methylpentan-2-one	Inhalation	vascular system	Not classified	Dog	NOAEL Not available	not available
4-methylpentan-2-one	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable
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
butanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
butanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
butanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
butanone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
phenol	Dermal	hematoppoitic system	Causes damage to organs	Rat	LOAEL 108 mg/kg	not available
phenol	Dermal	heart | nervous system | kidney and/or bladder	Causes damage to organs	Rat	LOAEL 107 mg/kg	24 hours
phenol	Dermal	liver	Not classified	Human	NOAEL Not available	not available
phenol	Inhalation	respiratory irritation	May cause respiratory irritation	Multiple animal species	NOAEL Not available	not available
phenol	Ingestion	kidney and/or bladder	Causes damage to organs	Rat	NOAEL 120 mg/kg/day	not applicable
phenol	Ingestion	respiratory system	Causes damage to organs	Human	NOAEL not available	poisoning and/or abuse
phenol	Ingestion	endocrine system | liver	Not classified	Rat	NOAEL 224 mg/kg	not applicable
phenol	Ingestion	heart	Not classified	Human	NOAEL Not available	poisoning and/or abuse

mix-cresol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available.	
mix-cresol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 68 mg/kg	
cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4-methylpentan-2-one	Inhalation	liver	Not classified	Rat	NOAEL 0.41 mg/l	13 weeks
4-methylpentan-2-one	Inhalation	heart	Not classified	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
4-methylpentan-2-one	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 0.4 mg/l	90 days
4-methylpentan-2-one	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
4-methylpentan-2-one	Inhalation	endocrine system | hematopoietic system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	90 days
4-methylpentan-2-one	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
4-methylpentan-2-one	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-methylpentan-2-one	Ingestion	heart | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 1,040 mg/kg/day	120 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	Rat	NOAEL 625	13 weeks

			data are not sufficient for classification		mg/kg/day	
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
butanone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
butanone	Inhalation	liver | kidney and/or bladder | heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles	Not classified	Rat	NOAEL 14.7 mg/l	90 days
butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
butanone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
phenol	Dermal	nervous system	May cause damage to organs though prolonged or repeated exposure	Rabbit	LOAEL 260 mg/kg/day	18 days
phenol	Inhalation	heart | liver | kidney and/or bladder | respiratory system	Causes damage to organs through prolonged or repeated exposure	Guinea pig	LOAEL 0.1 mg/l	41 days
phenol	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Multiple animal species	LOAEL 0.1 mg/l	14 days
phenol	Inhalation	hematopoietic system	Not classified	Human	NOAEL Not available	occupational exposure
phenol	Inhalation	immune system	Not classified	Rat	NOAEL 0.1 mg/l	2 weeks
phenol	Ingestion	kidney and/or bladder	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 12 mg/kg/day	14 days
phenol	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Mouse	LOAEL 1.8 mg/kg/day	28 days
phenol	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 308 mg/kg/day	13 weeks
phenol	Ingestion	liver	Not classified	Rat	NOAEL 40 mg/kg/day	14 days
phenol	Ingestion	respiratory system	Not classified	Rat	LOAEL 40 mg/kg/day	14 days
phenol	Ingestion	immune system	Not classified	Mouse	NOAEL 1.8 mg/kg/day	28 days
phenol	Ingestion	endocrine system	Not classified	Rat	NOAEL 120 mg/kg/day	14 days
phenol	Ingestion	skin | bone, teeth, nails, and/or hair	Not classified	Multiple animal species	NOAEL 1,204 mg/kg/day	103 weeks
mix-cresol	Ingestion	nervous system	Not classified	Rat	NOAEL 450 mg/kg/day	90 days
mix-cresol	Ingestion	hematopoietic system | liver | immune system | kidney and/or bladder	Not classified	Rat	NOAEL 2,024 mg/kg/day	90 days
cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24	90 days

					mg/l	
cyclohexane	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
cyclohexane	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks
cyclohexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 24 mg/l	14 weeks
cyclohexane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 8.6 mg/l	30 weeks
2,5-Di-tert-pentylhydroquinone	Ingestion	endocrine system | gastrointestinal tract | liver | kidney and/or bladder | heart | skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 150 mg/kg/day	90 days

Aspiration Hazard

Name	Value
4-methylpentan-2-one	Some positive data exist, but the data are not sufficient for classification
toluene	Aspiration hazard
cyclohexane	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 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
4-methylpentan-2-one	108-10-1	Green algae	Experimental	96 hours	EC50	400 mg/l
4-methylpentan-2-one	108-10-1	Water flea	Experimental	48 hours	EC50	>200 mg/l
4-methylpentan-2-one	108-10-1	Zebra Fish	Experimental	96 hours	LC50	>179 mg/l
4-methylpentan-2-one	108-10-1	Fathead minnow	Experimental	32 days	NOEC	56.2 mg/l
4-methylpentan-2-one	108-10-1	Water flea	Experimental	21 days	NOEC	78 mg/l
4-methylpentan-2-one	108-10-1	Activated sludge	Experimental	30 minutes	EC50	>1,000
Acrylonitrile - butadiene polymer	9003-18-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

Cresol-formaldehyde-phenol polymer	9039-25-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
phenol	108-95-2	Bacteria	Experimental	24 hours	IC50	21 mg/l
phenol	108-95-2	Green algae	Experimental	96 hours	EC50	61.1 mg/l
phenol	108-95-2	Rainbow trout	Experimental	96 hours	LC50	8.9 mg/l
phenol	108-95-2	Water flea	Experimental	48 hours	EC50	3.1 mg/l
phenol	108-95-2	Fish	Experimental	60 days	NOEC	0.077 mg/l
phenol	108-95-2	Water flea	Experimental	16 days	NOEC	0.16 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)
mix-cresol	1319-77-3	Activated sludge	Estimated	3 hours	EC50	461.4 mg/l
mix-cresol	1319-77-3	Fish	Estimated	96 hours	LC50	3.36 mg/l
mix-cresol	1319-77-3	Fish	Estimated	96 hours	LC50	4.4 mg/l
mix-cresol	1319-77-3	Water flea	Estimated	48 hours	EC50	7.7 mg/l
mix-cresol	1319-77-3	Fathead minnow	Estimated	32 days	NOEC	1.35 mg/l
mix-cresol	1319-77-3	Water flea	Estimated	21 days	NOEC	1 mg/l
butanone	78-93-3	Fathead minnow	Experimental	96 hours	LC50	2,993 mg/l
butanone	78-93-3	Green algae	Experimental	96 hours	ErC50	2,029 mg/l
butanone	78-93-3	Water flea	Experimental	48 hours	EC50	308 mg/l
butanone	78-93-3	Green algae	Experimental	96 hours	ErC10	1,289 mg/l
butanone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l
butanone	78-93-3	Bacteria	Experimental	16 hours	LOEC	1,150 mg/l

cyclohexane	110-82-7	Fathead minnow	Experimental	96 hours	LC50	4.53 mg/l
cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
cyclohexane	110-82-7	Bacteria	Experimental	24 hours	IC50	97 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Bluegill	Experimental	96 hours	LC50	0.013 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Green algae	Experimental	72 hours	ErC50	0.246 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Water flea	Experimental	48 hours	LC50	0.91 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Fathead minnow	Experimental	28 days	NOEC	0.0032 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Green algae	Experimental	72 hours	NOEC	0.049 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Water flea	Experimental	21 days	NOEC	0.011 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
2,5-Di-tert-pentylhydroquinone	79-74-3	Onion	Experimental	21 days	EC50	7.95 mg/kg (Dry Weight)
2,5-Di-tert-pentylhydroquinone	79-74-3	Redworm	Experimental	56 days	NOEC	1.7 mg/kg (Dry Weight)
2,5-Di-tert-pentylhydroquinone	79-74-3	Soil microbes	Experimental	28 days	EC50	>1,000 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4-methylpentan-2-one	108-10-1	Experimental Biodegradation	28 days	BOD	83 %BOD/ThOD	OECD 301F - Manometric respirometry
4-methylpentan-2-one	108-10-1	Experimental Photolysis		Photolytic half-life (in air)	2.3 days (t 1/2)	
Acrylonitrile - butadiene polymer	9003-18-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Cresol-formaldehyde-phenol polymer	9039-25-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
phenol	108-95-2	Experimental Biodegradation	100 hours	BOD	62 %BOD/ThOD	OECD 301C - MITI test (I)
toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
mix-cresol	1319-77-3	Estimated Biodegradation	28 days	BOD	65 %BOD/ThOD	OECD 301D - Closed bottle test
butanone	78-93-3	Experimental Biodegradation	28 days	BOD	98 %BOD/ThOD	OECD 301D - Closed bottle test
cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 %BOD/ThOD	OECD 301F - Manometric respirometry
cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.3 days (t 1/2)	
2,5-Di-tert-pentylhydroquinone	79-74-3	Experimental Aquatic Inherent Biodegrad.	38 days	CO2 evolution	1 %CO2 evolution/THCO2 evolution	similar to OECD 301B

2,5-Di-tert-pentylhydroquinone	79-74-3	Experimental Biodegradation		Half-life (t 1/2)	4 days (t 1/2)	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
4-methylpentan-2-one	108-10-1	Experimental Bioconcentration		Log Kow	1.9	OECD 117 log Kow HPLC method
Acrylonitrile - butadiene polymer	9003-18-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Cresol-formaldehyde-phenol polymer	9039-25-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
phenol	108-95-2	Experimental Bioconcentration		Log Kow	1.47	
toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
mix-cresol	1319-77-3	Experimental Bioconcentration		Log Kow	1.95	
butanone	78-93-3	Experimental Bioconcentration		Log Kow	0.3	OECD 117 log Kow HPLC method
cyclohexane	110-82-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	129	OECD305-Bioconcentration
cyclohexane	110-82-7	Experimental Bioconcentration		Log Kow	3.44	
2,5-Di-tert-pentylhydroquinone	79-74-3	Modeled Bioconcentration		Bioaccumulation factor	44	Catalogic™
2,5-Di-tert-pentylhydroquinone	79-74-3	Experimental Bioconcentration		Log Kow	5.1	EC A.23 Part. Coeff Slow-Stir

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
4-methylpentan-2-one	108-10-1	Modeled Mobility in Soil	Koc	150 l/kg	Episuite™
toluene	108-88-3	Experimental Mobility in Soil	Koc	37-160 l/kg	
cyclohexane	110-82-7	Modeled Mobility in Soil	Koc	970 l/kg	Episuite™
2,5-Di-tert-pentylhydroquinone	79-74-3	Experimental Mobility in Soil	Koc	4,800 l/kg	OECD 121 Estim. of Koc by HPLC

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. Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

EU waste code (product as sold)

08 01 11* 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	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
14.5 Environmental hazards	Not Environmentally Hazardous	Not applicable	Not a Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	F1	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
4-methylpentan-2-one	108-10-1	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
phenol	108-95-2	Gr. 3: Not classifiable	International Agency for Research on Cancer
4-methylpentan-2-one	108-10-1	Carc. 2	The retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain, UK Mandatory Classification and Labelling list
toluene	108-88-3	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 to Annex XVII of regulation (EC) 1907/2006, as amended for GB, with regard to restrictions on the manufacture, placing on the market and use when present in certain dangerous conditions. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

Ingredient	CAS Nbr
cyclohexane	110-82-7
toluene	108-88-3

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

Regulation UK regulation 2023/63 (marketing and use of explosive precursors and poisons)

This product contains a reportable substance according to UK legislation 1972/66: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see UK Regulation 2023/63 for further details.

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. 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.

COMAH Regulation, SI 2015/483
Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
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

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
cyclohexane	110-82-7	10	50
butanone	78-93-3	10	50
4-methylpentan-2-one	108-10-1	10	50
phenol	108-95-2	50	200
toluene	108-88-3	10	50

Regulation (EU) No 649/2012, as amended for GB
No chemicals listed

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

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic 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.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
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:
CLP: Ingredient table information was deleted.
Contains statement for sensitizers information was added.
GB Section 02: CLP Ingredient table information was added.
GB Section 02: Other hazards phrase information was added.
GB Section 04: First Aid - Symptoms and Effects (GB CLP) information was added.
GB Section 04: Information on toxicological effects information was added.
GB Section 12: Classification Warning information was added.
GB Section 15: Carcinogenicity information information was added.
GB Section 15: Carcinogenicity information information was modified.
GB Section 15: Chemical Safety Assessment information was added.
GBSDS Section 14 Transport in bulk - Main Heading information was added.
GBSDS Section 14 UN Number information was added.
Label: CLP Classification information was modified.
Label: CLP Percent Unknown information was deleted.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Label: Graphic information was modified.
List of sensitizers information was added.
OEL Reg Agency Desc information was modified.
Prints No Data if Adverse effects information is not present information was deleted.
Section 02: CLP Physical and Health Hazard Statements information was modified.
Section 02: Label Elements: GB Percent Unknown information was added.
Section 03: SCL table information was added.
Section 03: SCL table information was deleted.
Section 04: First Aid - Symptoms and Effects (CLP) information was deleted.
Section 04: Information on toxicological effects information was deleted.
Section 09: Flammability information information was added.
Section 09: Kinematic Viscosity information information was modified.
Section 09: Particle Characteristics N/A information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was deleted.
Section 11: GB Classification disclaimer information was added.
Section 11: GB No endocrine disruptor information available warning information was added.
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 deleted.
Section 11: Prolonged or repeated exposure may cause standard phrases 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 added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 11: Target Organs - Single Table information was modified.
Section 12: 12.6. Endocrine Disrupting Properties information was deleted.
Section 12: 12.6. Other adverse effects information was added.
Section 12: 12.7. Other adverse effects information was deleted.
Section 12: Classification Warning information was deleted.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: No endocrine disruptor information available warning information was deleted.
Section 12: Persistence and Degradability information information was modified.

Section 12:Bioccumulative potential information information was modified.
Section 14 Hazardous/Not Hazardous for Transportation information was deleted.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.
Section 14 Multiplier – Main Heading information was deleted.
Section 14 Multiplier – Regulation Data information was deleted.
Section 14 Transport Category – Main Heading information was deleted.
Section 14 Transport Category – Regulation Data information was deleted.
Section 14 Tunnel Code – Main Heading information was deleted.
Section 14 Tunnel Code – Regulation Data information was deleted.
Section 14 UN Number information was deleted.
Section 15: Carcinogenicity information information was deleted.
Section 15: Chemical Safety Assessment information was deleted.
Section 15: Seveso Hazard Category Text information was added.
Section 15: Seveso Substance Text information was added.
Section 15: Seveso Substance Text information was deleted.
Section 16: Web address information was added.
Section 16: Web address information was deleted.
Section 2: No PBT/vPvB information available warning information was added.
Section 2: Other hazards phrase information was deleted.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 4: First aid for eye contact information information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Eye/face protection information information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 9: Flammability (solid, gas) information information was deleted.
Section 9: Vapour density value 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 added.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was deleted.

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