



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

3M Adhesion Promoter K540NTUV

Product Identification Numbers

70-0711-0301-7 70-0711-0349-6

7100075484 7100074884

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

Identified uses

Automotive - Industrial/Professional use

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

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225
 Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
 Skin Sensitization, Category 1 - Skin Sens. 1; H317
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
 Aspiration Hazard, Category 1 - Asp. Tox. 1; H304
 Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
 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) | GHS07 (Exclamation mark) | GHS08 (Health Hazard) | GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
methylcyclohexane	108-87-2	203-624-3	55 - 70
n-butyl acetate	123-86-4	204-658-1	20 - 30
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	221-453-2	< 0.2
3,6-diazaoctanethylenediamin	112-24-3	203-950-6	< 0.1

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H304	May be fatal if swallowed and enters airways.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A	Avoid breathing vapours.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P331	Do NOT induce vomiting.

1% of the mixture consists of components of unknown acute oral toxicity.

Contains 1% 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]
methylcyclohexane	(CAS-No.) 108-87-2 (EC-No.) 203-624-3 (REACH-No.) 01-2119556887-18	55 - 70	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411 Aquatic Acute 1, H400,M=1
n-butyl acetate	(CAS-No.) 123-86-4 (EC-No.) 204-658-1 (REACH-No.) 01-2119485493-29	20 - 30	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066
propan-2-ol	(CAS-No.) 67-63-0 (EC-No.) 200-661-7	< 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Polyamideamine	Trade Secret	1 - 5	Substance not classified as hazardous
2,5-Furandione, reaction products with polypropylene, chlorinated	(CAS-No.) 68609-36-9	1 - 5	Substance not classified as hazardous
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	(CAS-No.) 3101-60-8 (EC-No.) 221-453-2	< 0.2	Skin Sens. 1A, H317 Aquatic Chronic 2, H411
3,6-diazaoctanethylenediamin	(CAS-No.) 112-24-3 (EC-No.) 203-950-6	< 0.1	Acute Tox. 3, H311 Skin Corr. 1B, H314 Skin Sens. 1A, H317 Aquatic Chronic 3, H412

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. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

Do not induce vomiting. Get immediate 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). Allergic skin reaction (redness, swelling, blistering, and itching). Aspiration pneumonitis (coughing, gasping, choking, burning of the mouth, and difficulty breathing). 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**

Carbon monoxide

Carbon dioxide.

Hydrogen Chloride

Condition

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 vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire extinguishing foam that is resistant to polar solvents. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. 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
n-butyl acetate	123-86-4	UK HSC	TWA:724 mg/m ³ (150 ppm);STEL:966 mg/m ³ (200 ppm)	
propan-2-ol	67-63-0	UK HSC	TWA:999 mg/m ³ (400 ppm);STEL:1250 mg/m ³ (500 ppm)	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

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

Recommended monitoring procedures:Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

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

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

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards

Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

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

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

Applicable Norms/Standards

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Straw
Odor	Solvent

Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>Not applicable.</i>
Boiling point/boiling range	101 °C [<i>Test Method:Estimated</i>] [<i>Details:based on methylcyclohexane</i>]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Flash point	-3.9 °C [<i>Test Method:Closed Cup</i>]
Autoignition temperature	265 °C [<i>Test Method:Estimated</i>]
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	4.7 mm ² /sec
Water solubility	<i>No data available.</i>
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Density	0.81 g/cm ³
Relative density	0.81 [<i>Ref Std:WATER=1</i>]
Relative Vapour Density	<i>No data available.</i>

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Percent volatile	approximately 97 % weight [<i>Details:Calculated</i>]

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

Sparks and/or flames.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Signs and Symptoms of Exposure

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

Inhalation

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact

Prolonged or repeated exposure may cause: Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

Chemical (aspiration) pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish coloured skin (cyanosis), and may be fatal. Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

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

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	Inhalation-Vapour(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
methylcyclohexane	Inhalation-Vapour (4 hours)	Mouse	LC50 26 mg/l
methylcyclohexane	Dermal	Rabbit	LD50 > 86,700 mg/kg
methylcyclohexane	Ingestion	Rat	LD50 > 3,200 mg/kg
n-butyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
n-butyl acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.4 mg/l

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n-butyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 > 20 mg/l
n-butyl acetate	Ingestion	Rat	LD50 > 8,800 mg/kg
propan-2-ol	Dermal	Rabbit	LD50 12,870 mg/kg
propan-2-ol	Inhalation-Vapour (4 hours)	Rat	LC50 72.6 mg/l
propan-2-ol	Ingestion	Rat	LD50 4,710 mg/kg
2,5-Furandione, reaction products with polypropylene, chlorinated	Dermal	Guinea pig	LD50 > 1,000 mg/kg
2,5-Furandione, reaction products with polypropylene, chlorinated	Ingestion	Rat	LD50 > 3,200 mg/kg
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	Dermal	Rat	LD50 > 2,000 mg/kg
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	Ingestion	Rat	LD50 > 2,000 mg/kg
3,6-diazaoctanethylenediamin	Dermal	Rabbit	LD50 550 mg/kg
3,6-diazaoctanethylenediamin	Ingestion	Rat	LD50 2,500 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
methylcyclohexane	Rabbit	Minimal irritation
n-butyl acetate	Rabbit	Minimal irritation
propan-2-ol	Multiple animal species	No significant irritation
2,5-Furandione, reaction products with polypropylene, chlorinated	Guinea pig	No significant irritation
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	Rat	No significant irritation
3,6-diazaoctanethylenediamin	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
methylcyclohexane	Rabbit	Mild irritant
n-butyl acetate	Rabbit	Moderate irritant
propan-2-ol	Rabbit	Severe irritant
2,5-Furandione, reaction products with polypropylene, chlorinated	Professional judgement	Mild irritant
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	Rabbit	No significant irritation
3,6-diazaoctanethylenediamin	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
n-butyl acetate	Multiple animal species	Not classified
propan-2-ol	Guinea pig	Not classified
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	Mouse	Sensitising
3,6-diazaoctanethylenediamin	Guinea pig	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
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n-butyl acetate	In Vitro	Not mutagenic
propan-2-ol	In Vitro	Not mutagenic
propan-2-ol	In vivo	Not mutagenic
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	In vivo	Not mutagenic
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
methylcyclohexane	Inhalation	Multiple animal species	Not carcinogenic
propan-2-ol	Inhalation	Rat	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
n-butyl acetate	Inhalation	Not classified for female reproduction	Rat	NOAEL 7.1 mg/l	premating & during gestation
n-butyl acetate	Inhalation	Not classified for development	Rat	NOAEL 7.1 mg/l	premating & during gestation
propan-2-ol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	2 generation
propan-2-ol	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
propan-2-ol	Ingestion	Not classified for development	Rat	NOAEL 400 mg/kg/day	during organogenesis
propan-2-ol	Inhalation	Not classified for development	Rat	LOAEL 9 mg/l	during gestation
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	Ingestion	Not classified for development	Rat	NOAEL 150 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
methylcyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
methylcyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
methylcyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
n-butyl acetate	Inhalation	respiratory system	May cause damage to organs	Rat	LOAEL 2.6 mg/l	4 hours
n-butyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
n-butyl acetate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	not available
n-butyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

propan-2-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
propan-2-ol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
propan-2-ol	Inhalation	auditory system	Not classified	Guinea pig	NOAEL 13.4 mg/l	24 hours
propan-2-ol	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
methylcyclohexane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 1.6 mg/l	12 months
methylcyclohexane	Inhalation	liver	Not classified	Rabbit	NOAEL 12 mg/l	10 weeks
n-butyl acetate	Inhalation	olfactory system	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
n-butyl acetate	Inhalation	liver kidney and/or bladder	Not classified	Rabbit	NOAEL 7.26 mg/l	13 days
propan-2-ol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 12.3 mg/l	24 months
propan-2-ol	Inhalation	nervous system	Not classified	Rat	NOAEL 12 mg/l	13 weeks
propan-2-ol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	12 weeks
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	Ingestion	endocrine system hematopoietic system liver immune system nervous system heart skin gastrointestinal tract bone, teeth, nails, and/or hair muscles eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 500 mg/kg/day	90 days

Aspiration Hazard

Name	Value
methylcyclohexane	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
methylcyclohexane	108-87-2	N/A	Experimental	96 hours	LC50	3.3 mg/l
methylcyclohexane	108-87-2	Green algae	Experimental	72 hours	ErC50	0.134 mg/l
methylcyclohexane	108-87-2	Medaka	Experimental	96 hours	LC50	2.07 mg/l
methylcyclohexane	108-87-2	Striped bass	Experimental	96 hours	LC50	5.8 mg/l
methylcyclohexane	108-87-2	Water flea	Experimental	48 hours	EC50	0.326 mg/l
methylcyclohexane	108-87-2	Green algae	Experimental	72 hours	NOEC	0.022 mg/l
n-butyl acetate	123-86-4	Anaerobic sludge	Experimental	24 hours	NOEC	1,200 mg/l
n-butyl acetate	123-86-4	Bacteria	Experimental	18 hours	EC50	959 mg/l
n-butyl acetate	123-86-4	Brine shrimp	Experimental	48 hours	LC50	32 mg/l
n-butyl acetate	123-86-4	Fathead minnow	Experimental	96 hours	LC50	18 mg/l
n-butyl acetate	123-86-4	Green algae	Experimental	72 hours	ErC50	674.7 mg/l
n-butyl acetate	123-86-4	Water flea	Experimental	24 hours	EC50	72.8 mg/l
propan-2-ol	67-63-0	Bacteria	Experimental	16 hours	LOEC	1,050 mg/l
propan-2-ol	67-63-0	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
propan-2-ol	67-63-0	Invertebrate	Experimental	24 hours	LC50	>10,000 mg/l
propan-2-ol	67-63-0	Medaka	Experimental	96 hours	LC50	>100 mg/l
propan-2-ol	67-63-0	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
propan-2-ol	67-63-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
propan-2-ol	67-63-0	Water flea	Experimental	21 days	NOEC	100 mg/l
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Green algae	Experimental	72 hours	EbC50	9 mg/l
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Rainbow trout	Experimental	96 hours	LC50	7.5 mg/l
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Water flea	Experimental	48 hours	EC50	67.9 mg/l
3,6-diazaoctanethylenediamine	112-24-3	Green algae	Experimental	72 hours	EC50	27.4 mg/l
3,6-diazaoctanethylenediamine	112-24-3	Guppy	Experimental	96 hours	LC50	570 mg/l
3,6-diazaoctanethylenediamine	112-24-3	Water flea	Experimental	48 hours	EC50	37.4 mg/l
3,6-diazaoctanethylenediamine	112-24-3	Green algae	Experimental	72 hours	NOEC	0.468 mg/l
3,6-diazaoctanethylenediamine	112-24-3	Water flea	Experimental	21 days	NOEC	2.86 mg/l

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12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
methylcyclohexane	108-87-2	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301D - Closed bottle test
methylcyclohexane	108-87-2	Experimental Photolysis		Photolytic half-life (in air)	3.0 days (t 1/2)	
n-butyl acetate	123-86-4	Experimental Biodegradation	28 days	BOD	98 %BOD/ThOD	OECD 301D - Closed bottle test
propan-2-ol	67-63-0	Experimental Biodegradation	14 days	BOD	86 %BOD/ThOD	OECD 301C - MITI test (I)
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	Data not available - insufficient	N/A	N/A	N/A	N/A
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Experimental Biodegradation	28 days	BOD	1.1 %BOD/ThOD	OECD 301D - Closed bottle test
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	17 days (t 1/2)	OECD 111 Hydrolysis func of pH
3,6-diazoctanethylenediamin	112-24-3	Experimental Biodegradation	20 days	BOD	0 %BOD/ThOD	OECD 301D - Closed bottle test

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
methylcyclohexane	108-87-2	Experimental BCF - Fish	56 days	Bioaccumulation factor	<=321	OECD305-Bioconcentration
methylcyclohexane	108-87-2	Experimental Bioconcentration		Log Kow	3.88	
n-butyl acetate	123-86-4	Experimental Bioconcentration		Log Kow	2.3	OECD 117 log Kow HPLC method
propan-2-ol	67-63-0	Experimental Bioconcentration		Log Kow	0.05	
2,5-Furandione, reaction products with polypropylene, chlorinated	68609-36-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Modeled Bioconcentration		Bioaccumulation factor	27	Catalogic™
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Experimental Bioconcentration		Log Kow	3.59	OECD 107 log Kow shke flask mtd
3,6-diazoctanethylenediamin	112-24-3	Experimental BCF - Fish	42 days	Bioaccumulation factor	<5.0	OECD305-Bioconcentration

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
methylcyclohexane	108-87-2	Modeled Mobility in Soil	Koc	2,328 l/kg	Episuite™
n-butyl acetate	123-86-4	Modeled Mobility in Soil	Koc	70 l/kg	Episuite™
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Modeled Mobility in Soil	Koc	530 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

EU waste code (product as sold)

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN1993	UN1993	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.(METHYLCYCLOHEXANE; N-BUTYL ACETATE)	FLAMMABLE LIQUID, N.O.S.(METHYLCYCLOHEXANE; N-BUTYL ACETATE)	FLAMMABLE LIQUID, N.O.S.(METHYLCYCLOHEXANE; N-BUTYL ACETATE)
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
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

Global inventory status

Contact 3M for more information. 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.

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Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E1 Hazardous to the Aquatic environment	100	200
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
propan-2-ol	67-63-0	10	50
methylcyclohexane	108-87-2	10	50
n-butyl acetate	123-86-4	10	50

Regulation (EU) No 649/2012

No chemicals listed

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
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.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:

EU Section 09: pH information information was added.
 Label: CLP Classification information was modified.
 Label: CLP Environmental Hazard Statements information was modified.
 Label: CLP Precautionary - Disposal information was deleted.
 Label: CLP Precautionary - Prevention information was modified.
 Label: CLP Precautionary - Response information was modified.
 Section 03: Composition table % Column heading information was added.
 Section 3: Composition/ Information of ingredients table information was modified.
 Section 03: Substance not applicable information was added.
 Section 04: First Aid - Symptoms and Effects (CLP) information was added.
 Section 04: Information on toxicological effects information was modified.
 Section 9: Evaporation Rate information information was deleted.
 Section 9: Explosive properties information information was deleted.
 Section 09: Kinematic Viscosity information information was added.
 Section 9: Melting point information information was modified.
 Section 9: Oxidising properties information information was deleted.
 Section 9: pH information information was deleted.
 Section 9: Property description for optional properties information was modified.
 Section 9: Vapour density text information was added.
 Section 9: Vapour density text information was deleted.
 Section 9: Viscosity information information was deleted.
 Section 11: Acute Toxicity table information was modified.
 Section 11: Classification disclaimer information was modified.
 Section 11: Health Effects - Skin information information was modified.
 Section 11: No endocrine disruptor information available warning information was added.
 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: Target Organs - Repeated Table information was added.
 Section 11: Target Organs - Repeated Table information was deleted.
 Section 12: 12.6. Endocrine Disrupting Properties information was added.
 Section 12: 12.7. Other adverse effects information was modified.
 Section 12: Component ecotoxicity information information was modified.
 Section 12: Contact manufacturer for more detail. information was deleted.
 Section 12: Mobility in soil information information was added.

Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12: Bioaccumulative potential information information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was added.
Section 14 UN Number Column data information was added.
Section 14 UN Number information was added.
Section 15: Regulations - Inventories information was added.
Section 15: Seveso Hazard Category Text information was added.
Section 15: Seveso Substance Text 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 modified.
Section 2: No PBT/vPvB information available warning information was added.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

3M United Kingdom MSDSs are available at www.3M.com/uk