



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 Hi-Strength 90 Spray Adhesive

Product Identification Numbers

YP-2080-6129-8

7000116790

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

Identified uses

Aerosol Adhesive.

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.

The aspiration hazard classification is not required because the product is an aerosol.

CLASSIFICATION:

Aerosol, Category 1 - Aerosol 1; H222, H229

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336

Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

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

DANGER.

Symbols

GHS02 (Flame) |GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms

Ingredient	CAS Nbr	EC No.	% by Wt
pentane	109-66-0	203-692-4	10 - 30
acetone	67-64-1	200-662-2	7 - 13

HAZARD STATEMENTS:

H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261E	Avoid breathing vapour or spray.
P273	Avoid release to the environment.

Storage:

P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
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SUPPLEMENTAL INFORMATION:**Supplemental Hazard Statements:**

EUH066	Repeated exposure may cause skin dryness or cracking.
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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
dimethyl ether	(CAS-No.) 115-10-6 (EC-No.) 204-065-8	40 - 60	Flam. Gas 1A, H220 Liquified gas, H280 Nota U
pentane	(CAS-No.) 109-66-0 (EC-No.) 203-692-4	10 - 30	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336 EUH066 Aquatic Chronic 2, H411 Nota C
acetone	(CAS-No.) 67-64-1 (EC-No.) 200-662-2	7 - 13	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	(CAS-No.) 31393-98-3	1 - 10	Aquatic Chronic 4, H413
cyclohexane	(CAS-No.) 110-82-7 (EC-No.) 203-806-2	3 - 7	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
Non-volatiles	Trade Secret	1 - 5	Substance not classified as hazardous
isopentane	(CAS-No.) 78-78-4 (EC-No.) 201-142-8	1 - 5	Flam. Liq. 1, H224 Asp. Tox. 1, H304 STOT SE 3, H336 EUH066 Aquatic Chronic 2, H411

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

Wash with soap and water. 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

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Use a fire fighting agent suitable for the surrounding fire.

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

Aldehydes.
Hydrocarbons.
formaldehyde
Carbon monoxide
Carbon dioxide.

Condition

During combustion.
During combustion.
During combustion.
During combustion.
During combustion.

5.3. Advice for fire-fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust 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.

6.3. Methods and material for containment and cleaning up

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. 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. Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. 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 contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. 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
pentane	109-66-0	UK HSC	TWA:1800 mg/m ³ (600 ppm)	
cyclohexane	110-82-7	UK HSC	TWA:350 mg/m ³ (100 ppm);STEL:1050 mg/m ³ (300 ppm)	
dimethyl ether	115-10-6	UK HSC	TWA:766 mg/m ³ (400 ppm);STEL:958 mg/m ³ (500 ppm)	
acetone	67-64-1	UK HSC	TWA:1210 mg/m ³ (500 ppm);STEL:3620 mg/m ³ (1500 ppm)	
isopentane	78-78-4	UK HSC	TWA:1800 mg/m ³ (600 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.

8.2. Exposure controls

8.2.1. Engineering controls

Do not remain in area where available oxygen may be reduced. 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.

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
Fluoroelastomer	0.4	=>8 hours
Nitrile rubber.	0.35	=>8 hours

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

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 vapours and particulates

Half facepiece or full facepiece supplied-air respirator

Organic vapour respirators may have short service life.

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

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid.

Specific Physical Form:

Aerosol

Colour	Colourless
Odor	Solvent
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>Not applicable.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Flash point	≥ -55 °C [Test Method:Closed Cup]
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	<i>Not applicable.</i>
Water solubility	Nil
Solubility- non-water	<i>Not applicable.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Density	0.71 g/ml
Relative density	[Ref Std:WATER=1] <i>Not applicable.</i>
Relative Vapour Density	<i>No data available.</i>

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	89.5 %
Evaporation rate	<i>No data available.</i>
Percent volatile	89.6 % weight

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

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 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

Simple asphyxiation: Signs/symptoms may include increased heart rate, rapid respirations, drowsiness, headache, incoordination, altered judgement, nausea, vomiting, lethargy, seizures, coma, and may be fatal. 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.

Eye contact

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

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

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.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
dimethyl ether	Inhalation-Gas (4 hours)	Rat	LC50 164,000 ppm
pentane	Dermal	Rabbit	LD50 3,000 mg/kg
pentane	Inhalation-Vapour (4 hours)	Rat	LC50 > 18 mg/l
pentane	Ingestion	Rat	LD50 > 2,000 mg/kg
acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
acetone	Inhalation-Vapour (4 hours)	Rat	LC50 76 mg/l
acetone	Ingestion	Rat	LD50 5,800 mg/kg
isopentane	Dermal	Rabbit	LD50 3,000 mg/kg
isopentane	Inhalation-Vapour (4 hours)	Rat	LC50 > 18 mg/l

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	hours)		
isopentane	Ingestion	Rat	LD50 > 2,000 mg/kg
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	Ingestion	Rat	LD50 > 2,000 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
Non-volatiles	Dermal	Rabbit	LD50 > 2,000 mg/kg
Non-volatiles	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
pentane	Rabbit	Minimal irritation
acetone	Mouse	Minimal irritation
isopentane	Rabbit	Minimal irritation
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	In vitro data	No significant irritation
cyclohexane	Rabbit	Mild irritant
Non-volatiles	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
pentane	Rabbit	Mild irritant
acetone	Rabbit	Severe irritant
isopentane	Rabbit	Mild irritant
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	In vitro data	No significant irritation
cyclohexane	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
pentane	Guinea pig	Not classified
isopentane	Guinea pig	Not classified
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	Multiple animal species	Not classified

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
dimethyl ether	In Vitro	Not mutagenic
dimethyl ether	In vivo	Not mutagenic
pentane	In vivo	Not mutagenic
pentane	In Vitro	Some positive data exist, but the data are not

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		sufficient for classification
acetone	In vivo	Not mutagenic
acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
isopentane	In vivo	Not mutagenic
isopentane	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	In Vitro	Not mutagenic
cyclohexane	In Vitro	Not mutagenic
cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
dimethyl ether	Inhalation	Rat	Not carcinogenic
acetone	Not specified.	Multiple animal species	Not carcinogenic

Reproductive Toxicity
Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
dimethyl ether	Inhalation	Not classified for development	Rat	NOAEL 40,000 ppm	during organogenesis
pentane	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
pentane	Inhalation	Not classified for development	Rat	NOAEL 30 mg/l	during organogenesis
acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
isopentane	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
isopentane	Inhalation	Not classified for development	Rat	NOAEL 30 mg/l	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

Target Organ(s)
Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
dimethyl ether	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 10,000 ppm	30 minutes
dimethyl ether	Inhalation	cardiac sensitisation	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 100,000 ppm	5 minutes
pentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
pentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available

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pentane	Inhalation	cardiac sensitisation	Not classified	Dog	NOAEL Not available	not available
pentane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	not available
acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
isopentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
isopentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
isopentane	Inhalation	cardiac sensitisation	Not classified	Dog	NOAEL Not available	not available
isopentane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	not available
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
dimethyl ether	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 25,000 ppm	2 years
dimethyl ether	Inhalation	liver	Not classified	Rat	NOAEL 20,000 ppm	30 weeks
pentane	Inhalation	peripheral nervous system	Not classified	Human	NOAEL Not available	occupational exposure
pentane	Inhalation	heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 20 mg/l	13 weeks
pentane	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	28 days
acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks

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acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
acetone	Inhalation	heart liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
acetone	Ingestion	skin bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
isopentane	Inhalation	peripheral nervous system	Not classified	Human	NOAEL Not available	occupational exposure
isopentane	Inhalation	heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 20 mg/l	13 weeks
isopentane	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	28 days
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	Ingestion	heart gastrointestinal tract hematopoietic system liver nervous system eyes kidney and/or bladder	Not classified	Rat	NOAEL 331 mg/kg/day	90 days
cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
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

Aspiration Hazard

Name	Value
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pentane	Aspiration hazard
isopentane	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
dimethyl ether	115-10-6	Bacteria	Experimental	N/A	EC10	>1,600 mg/l
dimethyl ether	115-10-6	Guppy	Experimental	96 hours	LC50	>4,100 mg/l
dimethyl ether	115-10-6	Water flea	Experimental	48 hours	EC50	>4,400 mg/l
pentane	109-66-0	Green algae	Experimental	72 hours	EC50	10.7 mg/l
pentane	109-66-0	Rainbow trout	Experimental	96 hours	LC50	4.26 mg/l
pentane	109-66-0	Water flea	Experimental	48 hours	EC50	2.7 mg/l
pentane	109-66-0	Green algae	Experimental	72 hours	NOEC	2.04 mg/l
acetone	67-64-1	Algae or other aquatic plants	Experimental	96 hours	EC50	11,493 mg/l
acetone	67-64-1	Invertebrate	Experimental	24 hours	LC50	2,100 mg/l
acetone	67-64-1	Rainbow trout	Experimental	96 hours	LC50	5,540 mg/l
acetone	67-64-1	Water flea	Experimental	21 days	NOEC	1,000 mg/l
acetone	67-64-1	Bacteria	Experimental	16 hours	NOEC	1,700 mg/l
acetone	67-64-1	Redworm	Experimental	48 hours	LC50	>100
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	31393-98-3	Activated sludge	Experimental	3 hours	NOEC	1,000 mg/l
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	31393-98-3	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l

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2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	31393-98-3	Water flea	Endpoint not reached	21 days	EL10	>100 mg/l
cyclohexane	110-82-7	Bacteria	Experimental	24 hours	IC50	97 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
isopentane	78-78-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Non-volatiles	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
dimethyl ether	115-10-6	Experimental Biodegradation	28 days	BOD	5 %BOD/ThOD	OECD 301D - Closed bottle test
dimethyl ether	115-10-6	Experimental Photolysis		Photolytic half-life (in air)	12.4 days (t 1/2)	
pentane	109-66-0	Experimental Biodegradation	28 days	BOD	87 %BOD/ThOD	OECD 301F - Manometric respirometry
pentane	109-66-0	Experimental Photolysis		Photolytic half-life (in air)	8.07 days (t 1/2)	
acetone	67-64-1	Experimental Biodegradation	28 days	BOD	78 %BOD/ThOD	OECD 301D - Closed bottle test
acetone	67-64-1	Experimental Photolysis		Photolytic half-life (in air)	147 days (t 1/2)	
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	31393-98-3	Experimental Biodegradation	28 days	BOD	4 %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)	4.1 days (t 1/2)	
isopentane	78-78-4	Experimental Biodegradation	28 days	BOD	71.43 %BOD/ThOD	
isopentane	78-78-4	Experimental Photolysis		Photolytic half-life (in air)	8.11 days (t 1/2)	
Non-volatiles	Trade Secret	Data not available or insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
dimethyl ether	115-10-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
pentane	109-66-0	Estimated Bioconcentration		Bioaccumulation factor	26	
acetone	67-64-1	Experimental BCF - Other		Bioaccumulation factor	0.65	
acetone	67-64-1	Experimental Bioconcentration		Log Kow	-0.24	

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2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	31393-98-3	Experimental Bioconcentration		Log Kow	7.41	
cyclohexane	110-82-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	129	OECD305-Bioconcentration
cyclohexane	110-82-7	Experimental Bioconcentration		Log Kow	3.44	
isopentane	78-78-4	Experimental Bioconcentration		Log Kow	2.3	
Non-volatiles	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
dimethyl ether	115-10-6	Modeled Mobility in Soil	Koc	3 l/kg	Episuite™
pentane	109-66-0	Estimated Mobility in Soil	Koc	72 l/kg	Episuite™
acetone	67-64-1	Modeled Mobility in Soil	Koc	9.7 l/kg	Episuite™
cyclohexane	110-82-7	Modeled Mobility in Soil	Koc	770 l/kg	

12.5. Results of the PBT and vPvB assessment

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

12.6. 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.

Incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. 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
- 16 05 04* Gases in pressure containers (including halons) containing dangerous substances

EU waste code (product container after use)

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS, FLAMMABLE	AEROSOLS
14.3 Transport hazard class(es)	2.1	2.1	2.1
14.4 Packing group	Not applicable.	Not applicable.	Not applicable.
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	5F	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**

Non-volatiles

Trade Secret

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.

<u>Ingredient</u>	<u>CAS Nbr</u>
cyclohexane	110-82-7

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.

COMAH Regulation, SI 2015/483

Seveso hazard categories, Annex 1, Part 1

None

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
acetone	67-64-1	10	50
cyclohexane	110-82-7	10	50
dimethyl ether	115-10-6	10	50
isopentane	78-78-4	10	50
pentane	109-66-0	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.
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.

H229	Pressurised container: may burst if heated.
H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.
H413	May cause long lasting harmful effects to aquatic life.

Revision information:

GB Section 02: CLP Ingredient table information was added.
GB Section 02: Other hazards phrase 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: 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.
Industrial Use of Adhesives and Sealants: Section 16: Annex information was deleted.
Professional Use of Adhesives: Section 16: Annex information was deleted.
CLP: Ingredient table information was deleted.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Storage information was modified.
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 04: Information on toxicological effects information was deleted.
Section 8: 8.2. Exposure controls information information was deleted.
Section 8: 8.2.3. Environmental exposure controls information information was deleted.
Section 8: DNEL table row information was deleted.
Section 8: PNEC table row information was deleted.
Section 9: Vapour density value information was modified.
Section 11: Acute Toxicity 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: No endocrine disruptor information available warning information was deleted.
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 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.
Prints No Data if Adverse effects information is not present information was deleted.
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: Bioaccumulative potential information was modified.
Section 14 Classification Code – Regulation Data information was modified.
Section 14 Control Temperature – Regulation Data information was modified.
Section 14 Emergency Temperature – Regulation Data information was modified.
Section 14 Multiplier – Main Heading information was deleted.
Section 14 Multiplier – Regulation Data information was deleted.
Section 14 Other Dangerous Goods – Regulation Data information was modified.
Section 14 Packing Group – Regulation Data information was modified.
Section 14 Segregation – Regulation Data information was modified.
Section 14 Transport Category – Main Heading information was deleted.
Section 14 Transport Category – Regulation Data information was deleted.
Section 14 Transport in bulk – Regulation Data information was modified.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.
Section 14 Transport Not Permitted – Main Heading information was deleted.
Section 14 Transport Not Permitted – 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 was deleted.
Section 15: Chemical Safety Assessment information was deleted.
Section 15: Seveso Substance Text information was added.
Annex: Prediction of exposure statement information was deleted.
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.
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.

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3M SDSs for Great Britain are available at www.3M.com/uk

For Northern Ireland documents, please contact your 3M representative to obtain a copy.