

Safety Data Sheet

Copyright, 2017, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilising 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

 Document group:
 27-4968-7
 Version number:
 10.01

 Revision date:
 15/02/2017
 Supersedes date:
 20/07/2016

Transportation version number: 2.01 (18/08/2015)

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 Scotch-Weld Spray 77 Multipurpose Adhesive

Product Identification Numbers

UU-0015-4747-8 YP-2080-6119-9 YP-2080-6163-7

7000042448 7000148092 7100040280

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

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Aerosol, Category 1 - Aerosol 1; H222, H229

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

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

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

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols:

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

Pictograms







Ingredients:

Ingredient CAS Nbr % by Wt
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 927-510-4 10 - 30
Cyclohexane 110-82-7 7 - 13

HAZARD STATEMENTS:

H222 Extremely flammable aerosol.

H229 Pressurised container, may burst if heated.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

General:

P102 Keep out of reach of children.

Prevention:

P210A 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.

Storage:

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.

Disposal:

P501 Dispose of contents/container in accordance with applicable local/regional/national/international

regulations.

10% of the mixture consists of components of unknown acute oral toxicity.

Contains 57% of components with unknown hazards to the aquatic environment.

Notes on labelling

H304 is not required on the label because the product is an aerosol.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Non-Volatile Components	Trade Secret		10 - 30	Substance not classified as hazardous
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (REACH Reg. No.:01-2119475515-33)		927-510-4	10 - 30	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H411 (Vendor)
Propane	74-98-6	200-827-9	10 - 20	Flam. Gas 1, H220; Liquified gas, H280 - Nota U (CLP)
Butadiene Copolymer	Trade Secret		7 - 13	Substance not classified as hazardous
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane (REACH Reg. No.:01-2119484651-34)		931-254-9	7 - 13	Flam. Liq. 2, H225; Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic Chronic 2, H411 (Vendor)
Dimethyl Ether	115-10-6	204-065-8	7 - 13	Flam. Gas 1, H220; Liquified gas, H280 - Nota U (CLP)
Cyclohexane	110-82-7	203-806-2	7 - 13	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 (CLP)
Non Volatile Compound	Trade Secret		5 - 10	Substance not classified as hazardous
Thermoplastic resin	Trade Secret		5 - 10	Substance with a Community level exposure limit in the workplace
Pentane	109-66-0	203-692-4	5 - 10	Flam. Liq. 2, H225; Asp. Tox. 1, H304; STOT SE 3, H336; EUH066; Aquatic Chronic 2, H411 - Nota C (CLP)
Butane (REACH Reg. No.:01-2119474691-32)	106-97-8	203-448-7	3 - 7	Flam. Gas 1, H220; Liquified gas, H280 - Nota C,U (CLP)
Limestone	1317-65-3	215-279-6	0 - 5	Substance with a Community level exposure limit in the workplace
Isobutane	75-28-5	200-857-2	1 - 5	Flam. Gas 1, H220; Liquified gas, H280 - Nota C,U (CLP)
2-methylbutane	78-78-4	201-142-8	0.5 - 5	Flam. Liq. 1, H224; Asp. Tox. 1, H304; STOT SE 3, H336; EUH066; Aquatic Chronic 2, H411 (CLP)

Note: Any entry in the EC# column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance. Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. 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.

Eve contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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

See Section 11.1 Information on toxicological effects

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

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

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	<u>Condition</u>
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Ketones.	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.

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

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. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. 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

Do not use in a confined area with minimal air exchange. 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 release to the environment. 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 to prevent loss of stabilizing materials. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Protect from sunlight. Store in a well-ventilated place. 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
Butane	106-97-8	UK HSC	TWA:1450 mg/m ³ (600 ppm);STEL:1810 mg/m ³ (750 ppm)	
Pentane	109-66-0	UK HSC	TWA:1800 mg/m ³ (600 ppm)	
Cyclohexane	110-82-7	UK HSC	TWA:350 mg/m³(100 ppm);STEL:1050 mg/m³(300 ppm)	
Dimethyl Ether	115-10-6	UK HSC	TWA:766 mg/m³(400 ppm);STEL:958 mg/m³(500 ppm)	
Limestone	1317-65-3	UK HSC	TWA(as inhalable dust):10 mg/m3;TWA(as respirable dust):4 mg/m3;TWA(Inhalable):10 mg/m3;TWA(respirable):4 mg/m3	
Propane	74-98-6	UK HSC	Limit value not established:	asphyxiant
2-methylbutane	78-78-4	UK HSC	TWA:1800 mg/m ³ (600 ppm)	
Thermoplastic resin	Trade Secret	UK HSC	TWA(as fume):0.05	Respiratory Sensitizer

mg/m³;STEL(as fume):0.15 mg/m³

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.

Derived no effect level (DNEL)

Ingredient	Degradation	Population	Human exposure	DNEL
	Product		pattern	
Hydrocarbons, C6,		Worker	Dermal, Long-term	13,964 mg/kg bw/d
isoalkanes, < 5% n-			exposure (8 hours),	
Hexane			Systemic effects	
Hydrocarbons, C6,		Worker	Inhalation, Long-term	5,306 mg/m ³
isoalkanes, < 5% n-			exposure (8 hours),	_
Hexane			Systemic effects	
Hydrocarbons, C7, n-		Worker	Dermal, Long-term	300 mg/kg bw/d
alkanes, isoalkanes,			exposure (8 hours),	
cyclics			Systemic effects	
Hydrocarbons, C7, n-		Worker	Inhalation, Long-term	2,085 mg/m ³
alkanes, isoalkanes,			exposure (8 hours),	-
cyclics			Systemic effects	

8.2. Exposure controls

In addition, refer to the annex for more information.

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.

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:

MaterialThickness (mm)Breakthrough TimePolymer laminateNo data availableNo data available

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

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

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Gas.
Specific Physical Form: Aerosol

Appearance/OdourSweet odour; clearOdour thresholdNo data available.pHNot applicable.Boiling point/boiling rangeNot applicable.Melting pointNot applicable.

Flammability (solid, gas) Flammable Aerosol: Category 1.

Explosive propertiesNot classified **Oxidising properties**Not classified

Flash point -42 °C [Details: Aerosol Adhesive]

Autoignition temperatureNo data available.Flammable Limits(LEL)No data available.Flammable Limits(UEL)No data available.Vapour pressureNot applicable.

Relative density approximately 0.7 [Ref Std:WATER=1]

Water solubility No data available. Solubility- non-water Not applicable. No data available. Partition coefficient: n-octanol/water **Evaporation rate** No data available. No data available. Vapour density **Decomposition temperature** *Not applicable.* Viscosity Not applicable. **Density** <=0.7 g/ml

9.2. Other information

Percent volatile approximately 75 %

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

Sparks and/or flames.

10.5 Incompatible materials

Strong acids.

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 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 3M assessments.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

Intentional concentration and inhalation may be harmful or fatal. 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

Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye contact

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

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.

Single exposure, above recommended guidelines, may cause:

Cardiac sensitisation: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation- Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Propane	Inhalation- Gas (4 hours)	Rat	LC50 > 200,000 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
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation- Vapour (4 hours)	Not available	LC50 > 20 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	Rat	LD50 > 5,000 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
Dimethyl Ether	Inhalation- Gas (4 hours)	Rat	LC50 164,000 ppm
Butadiene Copolymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Butadiene Copolymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Dermal		LD50 > 5,000 mg/kg
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Inhalation- Vapour (4 hours)	Rat	LC50 > 20 mg/l
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Ingestion	Rat	LD50 > 5,000 mg/kg
Non Volatile Compound	Dermal		LD50 estimated to be > 5,000 mg/kg
Non Volatile Compound	Ingestion	Rat	LD50 > 34,000 mg/kg
Butane	Inhalation- Gas (4 hours)	Rat	LC50 277,000 ppm
Thermoplastic resin	Dermal	Rat	LD50 > 2,000 mg/kg
Thermoplastic resin	Ingestion	Rat	LD50 > 2,000 mg/kg
Isobutane	Inhalation- Gas (4 hours)	Rat	LC50 276,000 ppm
2-methylbutane	Dermal	Rabbit	LD50 3,000 mg/kg
2-methylbutane	Inhalation- Vapour (4 hours)	Rat	LC50 > 18 mg/l
2-methylbutane	Ingestion	Rat	LD50 > 2,000 mg/kg
Limestone	Dermal	Rat	LD50 > 2,000 mg/kg
Limestone	Inhalation- Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Limestone	Ingestion	Rat	LD50 6,450 mg/kg

Limestone

ATE = acute toxicity estimate

Skin Corrosion/Irritation		
Name	Species	Value
Propane	Rabbit	Minimal irritation
Pentane	Rabbit	Minimal irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Professio	Irritant

	nal judgemen t	
Cyclohexane	Rabbit	Mild irritant
Butadiene Copolymer	Professio	Minimal irritation
	nal	
	judgemen	
	t	
Butane	Professio	No significant irritation
	nal	_
	judgemen	
	t	
Thermoplastic resin	Rabbit	No significant irritation
Isobutane	Professio	No significant irritation
	nal	
	judgemen	
	t	
2-methylbutane	Rabbit	Minimal irritation
Limestone	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Propane	Rabbit	Mild irritant
Pentane	Rabbit	Mild irritant
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Professio	No significant irritation
	nal judgemen	
	t	
Cyclohexane	Rabbit	Mild irritant
Butane	Rabbit	No significant irritation
Thermoplastic resin	Rabbit	Mild irritant
Isobutane	Professio nal judgemen t	No significant irritation
2-methylbutane	Rabbit	Mild irritant
Limestone	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Pentane	Guinea pig	Not sensitising
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not available	Not sensitising
Thermoplastic resin	Human and animal	Not sensitising
2-methylbutane	Guinea pig	Not 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
Propane	In Vitro	Not mutagenic
Pentane	In vivo	Not mutagenic
Pentane	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
Dimethyl Ether	In Vitro	Not mutagenic
Dimethyl Ether	In vivo	Not mutagenic
Butane	In Vitro	Not mutagenic
Isobutane	In Vitro	Not mutagenic
2-methylbutane	In vivo	Not mutagenic
2-methylbutane	In Vitro	Some positive data exist, but the data are not
		sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Dimethyl Ether	Inhalation	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Pentane	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
Pentane	Inhalation	Not toxic to development	Rat	NOAEL 30 mg/l	during organogenesis
Cyclohexane	Inhalation	Not toxic to female reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 6.9 mg/l	2 generation
Dimethyl Ether	Inhalation	Not toxic to development	Rat	NOAEL 40,000 ppm	during organogenesis
2-methylbutane	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
2-methylbutane	Inhalation	Not toxic to development	Rat	NOAEL 30 mg/l	during organogenesis
Limestone	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propane	Inhalation	cardiac sensitisation	Causes damage to organs	Human	NOAEL Not available	
Propane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Propane	Inhalation	respiratory irritation	All data are negative	Human	NOAEL Not available	
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
Pentane	Inhalation	cardiac sensitisation	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL Not available	not available
Pentane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	not available

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	n- cyclics Inhalation central nervous system depression May cause drowsiness or dizziness		Professio nal judgeme nt	NOAEL Not available		
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL 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	Professio nal judgeme nt	NOAEL Not available	
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
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Butane	Inhalation	cardiac sensitisation	Causes damage to organs	Human	NOAEL Not available	
Butane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Butane	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 5,000 ppm	25 minutes
Butane	Inhalation	respiratory irritation	All data are negative	Rabbit	NOAEL Not available	
Isobutane	Inhalation	cardiac sensitisation	Causes damage to organs	Multiple animal species	NOAEL Not available	
Isobutane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Isobutane	Inhalation	respiratory irritation	All data are negative	Mouse	NOAEL Not available	
2-methylbutane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
2-methylbutane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
2-methylbutane	Inhalation	cardiac sensitisation	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL Not available	not available
2-methylbutane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	not available
Limestone	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes

Specific Target Organ Toxicity - repeated exposure

Specific Target Organ Toxicity - repeated exposure									
Name	Route	Target Organ(s)	Value		Test result	Exposure			
						Duration			
Pentane	Inhalation	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure			
Pentane	Inhalation	heart skin	All data are negative	Rat	NOAEL 20	13 weeks			

		endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system			mg/l	
Pentane	Ingestion	kidney and/or bladder	All data are negative	Rat	NOAEL 2,000 mg/kg/day	28 days
Cyclohexane	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	All data are negative	Rat	NOAEL 8.6 mg/l	30 weeks
Dimethyl Ether	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25,000 ppm	2 years
Dimethyl Ether	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 20,000 ppm	30 weeks
Butane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4,489 ppm	90 days
Butane	Inhalation	blood	All data are negative	Rat	NOAEL 4,489 ppm	90 days
Isobutane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4,500 ppm	13 weeks
2-methylbutane	Inhalation	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
2-methylbutane	Inhalation	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system	All data are negative	Rat	NOAEL 20 mg/l	13 weeks
2-methylbutane	Ingestion	kidney and/or bladder	All data are negative	Rat	NOAEL 2,000 mg/kg/day	28 days
Limestone	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

10011 WIOTI TIWEWI W								
Name	Value							
Pentane	Aspiration hazard							
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Aspiration hazard							

Cyclohexane	Aspiration hazard
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Aspiration hazard
2-methylbutane	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.

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 Nbr	Organism	Туре	Exposure	Test endpoint	Test result
Butadiene	Trade Secret		Data not			
Copolymer			available or			
			insufficient for			
			classification			
Butane	106-97-8		Data not			
			available or			
			insufficient for			
			classification			
Isobutane	75-28-5		Data not			
			available or			
			insufficient for			
T :	1217 (5.2	777	classification	0.6.1	1.050	. 100 /1
Limestone	1317-65-3	Western Mosquitofish	Experimental	96 hours	LC50	>100 mg/l
Limestone	1317-65-3	Rainbow trout	Experimental	42 days	NOEC	>100 mg/l
Cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
Cyclohexane	110-82-7	Fathead	Experimental	96 hours	LC50	4.53 mg/l
		minnow				
Cyclohexane	110-82-7	Green Algae	Experimental	72 hours	EC50	3.4 mg/l
Pentane	109-66-0	Green Algae	Experimental	72 hours	NOEC	2.04 mg/l
Pentane	109-66-0	Green Algae	Experimental	72 hours	EC50	7.51 mg/l
Pentane	109-66-0	Water flea	Experimental	48 hours	EC50	2.7 mg/l
Pentane	109-66-0	Rainbow trout	Experimental	96 hours	LC50	4.26 mg/l
Dimethyl Ether		Guppy	Experimental	96 hours	LC50	>4,100 mg/l
Dimethyl Ether	115-10-6	Water flea	Experimental	48 hours	EC50	>4,400 mg/l
Thermoplastic	Trade Secret	Green algae	Estimated		Effect Level	>100 mg/l
resin					50%	
Thermoplastic	Trade Secret	Fathead	Estimated		Lethal Level	>100 mg/l
resin		minnow			50%	
Thermoplastic	Trade Secret	Water flea	Estimated		Effect Level	>100 mg/l
resin					50%	
Thermoplastic	Trade Secret	Green Algae	Estimated		No obs Effect	>100 mg/l
resin					Level	
Hydrocarbons,	927-510-4		Data not			
C7, n-alkanes,			available or			

isoalkanes,		insufficient for	
cyclics		classification	
,	931-254-9	Data not	
C6, isoalkanes,		available or	
< 5% n-		insufficient for	
Hexane		classification	
2-methylbutane	78-78-4	Data not	
		available or	
		insufficient for	
		classification	
Propane	74-98-6	Data not	
		available or	
		insufficient for	
		classification	
Non Volatile	Trade Secret	Data not	
Compound		available or	
		insufficient for	
		classification	

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Pentane	109-66-0	Experimental	28 days	BOD	96 % weight	OECD 301C - MITI
		Biodegradation				test (I)
2-methylbutane	78-78-4	Experimental	20 days	Percent	100 % weight	Other methods
		Biodegradation		degraded		
Thermoplastic	Trade Secret	Experimental	28 days	CO2 evolution	47.3 % weight	OECD 301B - Modified
resin		Biodegradation				sturm or CO2
Dimethyl Ether	115-10-6	Experimental	28 days	BOD	5 % weight	OECD 301D - Closed
		Biodegradation				bottle test
Cyclohexane	110-82-7	Experimental	28 days	BOD	77 % weight	OECD 301F -
		Biodegradation				Manometric
						respirometry
Non Volatile	Trade Secret	Experimental	28 days	BOD	0 % weight	OECD 301C - MITI
Compound		Biodegradation				test (I)
Limestone	1317-65-3	Data not	N/A	N/A	N/A	N/A
		available or				
		insufficient for				
		classification				
Butadiene	Trade Secret	Data not	N/A	N/A	N/A	N/A
Copolymer		available or				
		insufficient for				
		classification				
Hydrocarbons,	931-254-9	Data not	N/A	N/A	N/A	N/A
C6, isoalkanes,		available or				
< 5% n-		insufficient for				
Hexane		classification				
Pentane	109-66-0	Experimental		Photolytic half-		Other methods
		Photolysis		life (in air)	1/2)	
Butane	106-97-8	Experimental		Photolytic half-		Other methods
		Photolysis		life (in air)	1/2)	
Dimethyl Ether	115-10-6	Experimental		Photolytic half-		Other methods
		Photolysis		life (in air)	1/2)	
Isobutane	75-28-5	Experimental		Photolytic half-	13.4 days (t	Other methods

		Photolysis		life (in air)	1/2)	
2-methylbutane	78-78-4	Experimental		Photolytic half-	8.11 days (t	Other methods
		Photolysis		life (in air)	1/2)	
Propane	74-98-6	Experimental		Photolytic half-	27.5 days (t	Other methods
		Photolysis		life (in air)	1/2)	
Cyclohexane	110-82-7	Experimental		Photolytic half-	4.14 days (t	Other methods
-		Photolysis		life (in air)	1/2)	
Hydrocarbons,	927-510-4	Data not	N/A	N/A	N/A	N/A
C7, n-alkanes,		available or				
isoalkanes,		insufficient for				
cyclics		classification				

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane	74-98-6	Experimental Bioconcentration		Log Kow	2.36	Other methods
Isobutane	75-28-5	Experimental Bioconcentrati on		Log Kow	2.76	Other methods
Butane	106-97-8	Experimental Bioconcentrati on		Log Kow	2.89	Other methods
Cyclohexane	110-82-7	Experimental BCF-Carp	56 days	Bioaccumulatio n factor	<129	Other methods
Pentane	109-66-0	Estimated Bioconcentrati on		Bioaccumulatio n factor	26	Estimated: Bioconcentration factor
2-methylbutane	78-78-4	Estimated Bioconcentrati on		Bioaccumulatio n factor	65	Estimated: Bioconcentration factor
Thermoplastic resin	Trade Secret	Estimated Bioconcentrati on		Bioaccumulatio n factor	7.4	Estimated: Bioconcentration factor
Limestone	1317-65-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Non Volatile Compound	Trade Secret	Estimated BCF-Carp	70 days	Bioaccumulatio n factor	11100	Other methods
Butadiene Copolymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	931-254-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl Ether	115-10-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrocarbons,	927-510-4	Data not	N/A	N/A	N/A	N/A

.....

C7, n-alkanes,	avail	lable or		
isoalkanes,	insut	fficient for		
cyclics	class	sification		

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

See Section 11.1 Information on toxicological effects

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. The facility should be equipped to handle gaseous waste. 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)

15 01 04 Metallic packaging

SECTION 14: Transportation information

UU-0015-4747-8

ADR/RID: UN1950, AEROSOLS, LIMITED QUANTITY, 2.1, (E), ADR Classification Code: 5F.

IMDG-CODE: UN1950, AEROSOLS, 2.1, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FD,SU.

ICAO/IATA: UN1950, AEROSOLS, FLAMMABLE, 2.1.

YP-2080-6119-9, YP-2080-6163-7

ADR/RID: UN1950, AEROSOLS, LIMITED QUANTITY, 2.1, (E), ADR Classification Code: 5F.

IMDG-CODE: UN1950, AEROSOLS, 2.1, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FD, SU.

ICAO/IATA: UN1950, AEROSOLS, FLAMMABLE, 2.1.

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.

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out for the relevant substances in this material by the registrant in accordance with regulation REGULATION (EC) No 1907/2006

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.
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.

Revision information:

Industrial Application of Coatings: Section 16: Annex information was modified.

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

Section 01: SAP Material Numbers information was added.

Section 3: Composition/Information of ingredients table information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12:Bioccumulative potential information information was modified.

Annex

1. Title			
Substance identification	Hydrocarbons, C6, isoalkanes, < 5% n- Hexane;		
	EC No. 931-254-9;		
	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics;		
	EC No. 927-510-4;		
Exposure Scenario Name	Industrial Application of Coatings		
Identified uses	PROC 07, ERC 04, SU 03 ;		
Processes, tasks and activities covered	Application of product. Spraying of substances/mixtures.		
2. Operational conditions and risk management measures			
Operating Conditions	Physical state:Liquid.		
	General operating conditions:		
	Assumes use at not more than 20°C above ambient temperature;		
	Duration of exposure per day at workplace [for one worker]: 8 hours/day;		
	Emission days per year: <= 20 days per year;		
	Indoor use;		
	Outdoor use;		

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

1. Title	
Substance identification	Hydrocarbons, C6, isoalkanes, < 5% n- Hexane; EC No. 931-254-9; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; EC No. 927-510-4;
Exposure Scenario Name	Professional Application of Coatings
Identified uses	PROC 11, ERC 08a, SU 22 ;
Processes, tasks and activities covered	Application of product. Spraying of substances/mixtures.
2. Operational conditions and risk mana	gement measures
Operating Conditions	Physical state:Liquid. General operating conditions: Assumes use at not more than 20°C above ambient temperature; Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 365 days/year; Indoor use; Outdoor use;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: None needed; Environmental: None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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

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