Safety Data Sheet

Document group:	27-5084-2	**Version number:**	10.01
Revision date:	20/09/2017	**Supersedes date:**	19/12/2016

Transportation version number: 3.00 (09/08/2015)

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 1609 Silicone Lubricant

Product Identification Numbers
YP-2080-6087-8

7000116753

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

Identified uses
Silicone lubricant.

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
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols:
GHS02 (Flame) |GHS07 (Exclamation mark) |

Pictograms

HAZARD STATEMENTS:

H222	Extremely flammable aerosol.
H229	Pressurised container. may burst if heated.
H315	Causes skin irritation.
H412	Harmful 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.

Contains 18% 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	EC No.	REACH Registration No.	% by Wt	Classification
Butane	106-97-8	203-448-7		30 - 60	Flam. Gas 1, H220; Liquified gas, H280 - Nota C,U

Isobutane	75-28-5	200-857-2		10 - 30	Flam. Gas 1, H220; Liquified gas, H280 - Nota C,U
Propane	74-98-6	200-827-9	01-2119486944-21	10 - 30	Flam. Gas 1, H220; Liquified gas, H280 - Nota U
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		927-510-4	01-2119475515-33	7 - 12	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H411
Siloxanes and silicones, di-Me	63148-62-9			5 - 10	Substance not classified as hazardous
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane		931-254-9	01-2119484651-34	< 8	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H411
Methylcyclohexane	108-87-2	203-624-3		1 - 3	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H411
Cyclopentane	287-92-3	206-016-6		1 - 3	Flam. Liq. 2, H225; Aquatic Chronic 3, H412
n-hexane	110-54-3	203-777-6		0 - 1	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Repr. 2, H361f; STOT SE 3, H336; STOT RE 2, H373; Aquatic Chronic 2, H411
Cyclohexane	110-82-7	203-806-2		0 - 0.5	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

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.

Eye 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	Condition
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	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
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. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR-AFFF type foam is recommended. 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
Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. 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.) Use personal protective equipment (eg. gloves, respirators…) as required.

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 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/m³(600 ppm);STEL:1810 mg/m³(750 ppm)	
n-hexane	110-54-3	UK HSC	TWA:72 mg/m3(20 ppm)	
Cyclohexane	110-82-7	UK HSC	TWA:350 mg/m³(100 ppm);STEL:1050 mg/m³(300 ppm)	
Propane	74-98-6	UK HSC	Limit value not established:	asphyxiant

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 Product	Population	Human exposure pattern	DNEL
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	13,964 mg/kg bw/d
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	5,306 mg/m³
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	300 mg/kg bw/d
Hydrocarbons, C7, n-		Worker	Inhalation, Long-term	2,085 mg/m³

alkanes, isoalkanes, cyclics			exposure (8 hours), Systemic effects	

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Agricultural soil	0.53 mg/kg d.w.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Freshwater	0.096 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Freshwater sediments	2.5 mg/kg d.w.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Marine water	0.096 mg/l
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		Marine water sediments	2.5 mg/kg d.w.

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: Under normal use conditions, eye exposure is not expected to be significant enough to require eye protection.
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:

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

Respiratory protection

Wear respiratory protection if ventilation is inadequate to prevent overexposure. 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	Liquid.
Specific Physical Form:	Aerosol
Appearance/Odour	Clear mist; Sweet, spicy odour.
Odour threshold	*No data available.*
pH	*Not applicable.*
Boiling point/boiling range	*Not applicable.*
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	-46 °C [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Relative density	0.59 [*Ref Std:*WATER=1]
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	*No data available.*
Vapour density	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*Not applicable.*
Density	0.59 g/ml

9.2. Other information

EU Volatile Organic Compounds	*No data available.*
Percent volatile	95 % 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	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. 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
Sprayed material may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy 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.
Single exposure, above recommended guidelines, may cause:
Cardiac sensitisation: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Butane	Inhalation-Gas (4	Rat	LC50 277,000 ppm

	hours)		
Isobutane	Inhalation-Gas (4 hours)	Rat	LC50 276,000 ppm
Propane	Inhalation-Gas (4 hours)	Rat	LC50 > 200,000 ppm
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
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
Siloxanes and silicones, di-Me	Dermal	Rabbit	LD50 > 19,400 mg/kg
Siloxanes and silicones, di-Me	Ingestion	Rat	LD50 > 17,000 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-hexane	Dermal	Rabbit	LD50 > 2,000 mg/kg
n-hexane	Inhalation-Vapour (4 hours)	Rat	LC50 170 mg/l
n-hexane	Ingestion	Rat	LD50 > 28,700 mg/kg
Cyclopentane	Dermal		LD50 estimated to be > 5,000 mg/kg
Cyclopentane	Inhalation-Vapour (4 hours)	Rat	LC50 > 25.3 mg/l
Cyclopentane	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

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Butane	Professional judgement	No significant irritation
Isobutane	Professional judgement	No significant irritation
Propane	Rabbit	Minimal irritation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Professional judgement	Irritant
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Not available	Irritant
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Methylcyclohexane	Rabbit	Minimal irritation
n-hexane	Human and animal	Mild irritant
Cyclopentane	Rabbit	Minimal irritation
Cyclohexane	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Butane	Rabbit	No significant irritation
Isobutane	Professional judgement	No significant irritation
Propane	Rabbit	Mild irritant
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Professional judgement	No significant irritation
Siloxanes and silicones, di-Me	Rabbit	No significant irritation
Methylcyclohexane	Rabbit	Mild irritant
n-hexane	Rabbit	Mild irritant
Cyclopentane	Rabbit	Mild irritant
Cyclohexane	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Not available	Not classified
n-hexane	Human	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
Butane	In Vitro	Not mutagenic
Isobutane	In Vitro	Not mutagenic
Propane	In Vitro	Not mutagenic
n-hexane	In Vitro	Not mutagenic
n-hexane	In vivo	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
Methylcyclohexane	Inhalation	Multiple animal species	Not carcinogenic
n-hexane	Dermal	Mouse	Not carcinogenic
n-hexane	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
n-hexane	Ingestion	Not classified for development	Mouse	NOAEL 2,200 mg/kg/day	during organogenesis
n-hexane	Inhalation	Not classified for development	Rat	NOAEL 0.7 mg/l	during gestation
n-hexane	Ingestion	Toxic to male reproduction	Rat	NOAEL 1,140	90 days

				mg/kg/day	
n-hexane	Inhalation	Toxic to male reproduction	Rat	LOAEL 3.52 mg/l	28 days
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
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	Not classified	Dog	NOAEL 5,000 ppm	25 minutes
Butane	Inhalation	respiratory irritation	Not classified	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	Not classified	Mouse	NOAEL Not available	
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	Not classified	Human	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
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-hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
n-hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL Not available	8 hours
n-hexane	Inhalation	respiratory system	Not classified	Rat	NOAEL 24.6 mg/l	8 hours

Cyclopentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	similar compoun ds	NOAEL Not available	
Cyclopentane	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	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Butane	Inhalation	kidney and/or bladder | blood	Not classified	Rat	NOAEL 4,489 ppm	90 days
Isobutane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 4,500 ppm	13 weeks
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-hexane	Inhalation	peripheral nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
n-hexane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 1.76 mg/l	13 weeks
n-hexane	Inhalation	liver	Not classified	Rat	NOAEL Not available	6 months
n-hexane	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.76 mg/l	6 months
n-hexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 35.2 mg/l	13 weeks
n-hexane	Inhalation	auditory system | immune system | eyes	Not classified	Human	NOAEL Not available	occupational exposure
n-hexane	Inhalation	heart | skin | endocrine system	Not classified	Rat	NOAEL 1.76 mg/l	6 months
n-hexane	Ingestion	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,140 mg/kg/day	90 days
n-hexane	Ingestion	endocrine system | hematopoietic system | liver | immune system | kidney and/or bladder	Not classified	Rat	NOAEL Not available	13 weeks
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

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Aspiration hazard
Hydrocarbons, C6, isoalkanes, < 5% n- Hexane	Aspiration hazard
Methylcyclohexane	Aspiration hazard
n-hexane	Aspiration hazard
Cyclopentane	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.

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	Type	Exposure	Test endpoint	Test result
Butane	106-97-8		Data not available or insufficient for classification			
Isobutane	75-28-5		Data not available or insufficient for classification			
Propane	74-98-6		Data not available or insufficient for classification			
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4		Data not available or insufficient for classification			
Siloxanes and silicones, di-Me	63148-62-9		Data not available or insufficient for classification			
Hydrocarbons, C6, isoalkanes, < 5% n-Hexane	931-254-9		Data not available or insufficient for classification			
Cyclopentane	287-92-3	Water flea	Experimental	48 hours	EC50	10.5 mg/l
Methylcyclohexane	108-87-2	Green Algae	Experimental	72 hours	EC50	0.134 mg/l
Methylcyclohexane	108-87-2	Ricefish	Experimental	96 hours	LC50	2.07 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-hexane	110-54-3	Fathead minnow	Experimental	96 hours	LC50	2.5 mg/l
n-hexane	110-54-3	Water flea	Experimental	48 hours	LC50	3.9 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

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol

Butane	106-97-8	Experimental Photolysis		Photolytic half-life (in air)	12.3 days (t 1/2)	Other methods
Isobutane	75-28-5	Experimental Photolysis		Photolytic half-life (in air)	13.4 days (t 1/2)	Other methods
Propane	74-98-6	Experimental Photolysis		Photolytic half-life (in air)	27.5 days (t 1/2)	Other methods
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Estimated Biodegradation	28 days	BOD	98 % BOD/ThBOD	OECD 301F - Manometric respirometry
Siloxanes and silicones, di-Me	63148-62-9	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
Cyclopentane	287-92-3	Experimental Photolysis		Photolytic half-life (in air)	6.11 days (t 1/2)	Other methods
Cyclopentane	287-92-3	Experimental Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301F - Manometric respirometry
Methylcyclohexane	108-87-2	Estimated Photolysis		Photolytic half-life (in air)	3.1 days (t 1/2)	Other methods
Methylcyclohexane	108-87-2	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301D - Closed bottle test
n-hexane	110-54-3	Experimental Bioconcentration	28 days	BOD	100 % weight	OECD 301C - MITI test (I)
n-hexane	110-54-3	Experimental Photolysis		Photolytic half-life (in air)	5.4 days (t 1/2)	Other methods
Cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 % BOD/ThBOD	OECD 301F - Manometric respirometry
Cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.14 days (t 1/2)	Other methods

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Butane	106-97-8	Experimental Bioconcentration		Log Kow	2.89	Other methods
Isobutane	75-28-5	Experimental Bioconcentration		Log Kow	2.76	Other methods
Propane	74-98-6	Experimental Bioconcentration		Log Kow	2.36	Other methods
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	927-510-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and silicones, di-Me	63148-62-9	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
Cyclopentane	287-92-3	Experimental Bioconcentration		Log Kow	3.00	Other methods
Methylcyclohexane	108-87-2	Experimental BCF-Carp	56 days	Bioaccumulation factor	<=321	OECD 305E - Bioaccumulation flow-through fish test
n-hexane	110-54-3	Estimated Bioconcentration		Bioaccumulation factor	50	Estimated: Bioconcentration factor
Cyclohexane	110-82-7	Experimental BCF-Carp	56 days	Bioaccumulation factor	129	OECD 305E - Bioaccumulation flow-through fish test

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. 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)
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

YP-2080-6087-8

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.

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 (EC) No 1907/2006 as amended

SECTION 16: Other information

List of relevant H statements

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
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.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
Industrial Application of Coatings: Section 16: Annex information was modified.
Professional Application of Coatings: Section 16: Annex information was modified.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 6: Accidental release environmental information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: DNEL table row information was modified.
Section 8: PNEC table row information was added.
Section 9: Property description for optional properties information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 15: Chemical Safety Assessment 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
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 07 -Industrial spraying ERC 04 -Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
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	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
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 11 -Non industrial spraying ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
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: 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