



Safety Data Sheet

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

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

1.1. Product identifier

3M™ Super 77™ Multipurpose Adhesive (Aerosol)

Product Identification Numbers

62-4977-4930-9

7000000931

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

Identified uses

Adhesive aerosol.

1.3. Details of the supplier of the safety data sheet

Address:	3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone:	+353 1 280 3555
E Mail:	tox.uk@mmm.com
Website:	www.3M.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

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

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

CLASSIFICATION:

Aerosol, Category 1 - Aerosol 1; H222, H229

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Sensitization, Category 1 - Skin Sens. 1; H317
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	EC No.	% by Wt
acetone	67-64-1	200-662-2	15 - 30
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate		915-687-0	0.1

HAZARD STATEMENTS:

H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
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.
P280E	Wear protective gloves.

Storage:

P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
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Contains 8% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

May displace oxygen and cause rapid suffocation.

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]
propane	(CAS-No.) 74-98-6 (EC-No.) 200-827-9 (REACH-No.) 01-2119486944-21	15 - 30	Flam. Gas 1A, H220 Liquified gas, H280 Nota U
acetone	(CAS-No.) 67-64-1 (EC-No.) 200-662-2 (REACH-No.) 01-2119471330-49	15 - 30	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
cyclohexane	(CAS-No.) 110-82-7 (EC-No.) 203-806-2 (REACH-No.) 01-2119463273-41	10 - 20	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
Hexane, mix	(CAS-No.) 601-007-00-7	10 - 20	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411 Nota 4,C
Terpene Phenolic	Trade Secret	< 10	Substance not classified as hazardous
Non-Volatile Components	Trade Secret	1 - 10	Substance not classified as hazardous
Petroleum Resins	(CAS-No.) 64742-16-1 (EC-No.) 265-116-8	< 5	Aquatic Chronic 4, H413
Non-Volatile Resin	Trade Secret	< 5	Substance not classified as hazardous
pentane	(CAS-No.) 109-66-0 (EC-No.) 203-692-4	< 5	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336 EUH066 Aquatic Chronic 2, H411 Nota C
ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6	< 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319
n-hexane	(CAS-No.) 110-54-3 (EC-No.) 203-777-6	< 0.5	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
toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9	< 0.3	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Aquatic Chronic 3, H412
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	(EC-No.) 915-687-0	0.1	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 Skin Sens. 1A, H317 Repr. 2, H361f

Any entry in the Identifier(s) 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

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6	(C >= 50%) Eye Irrit. 2, H319
n-hexane	(CAS-No.) 110-54-3 (EC-No.) 203-777-6	(C >= 5%) STOT RE 2, H373

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

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

The most important symptoms and effects based on the CLP classification include:

Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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

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

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Hydrocarbons.	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. 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

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 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
toluene	108-88-3	Ireland OELs	TWA(8 hours):192 mg/m3(50 ppm);TWA(8 hours):50 ppm(192 mg/m3);STEL(15 minutes):384 mg/m3(100 ppm);STEL(15 minutes):100 ppm(384 mg/m3)	SKIN
pentane	109-66-0	Ireland OELs	TWA(8 hours):3000 mg/m3(1000 ppm);TWA(8 hours):1000 ppm(3000 mg/m3)	
n-hexane	110-54-3	Ireland OELs	TWA(8 hours):72 mg/m3(20 ppm);TWA(8 hours):20 ppm(72 mg/m3)	SKIN
cyclohexane	110-82-7	Ireland OELs	TWA(8 hours):700 mg/m3(200 ppm);TWA(8 hours):200 ppm(700 mg/m3)	
ethanol	64-17-5	Ireland OELs	STEL(15 minutes):1000 ppm	
acetone	67-64-1	Ireland OELs	TWA(8 hours):1210 mg/m3(500 ppm);TWA(8 hours):500 ppm(1210 mg/m3)	

Ireland OELs : Ireland. OELs

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
cyclohexane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	2,016 mg/kg bw/d
cyclohexane		Worker	Inhalation, Long-term exposure (8 hours), Local effects	700 mg/m ³
cyclohexane		Worker	Inhalation, Long-term exposure (8 hours),	700 mg/m ³

			Systemic effects	
cyclohexane		Worker	Inhalation, Short-term exposure, Local effects	700 mg/m ³
cyclohexane		Worker	Inhalation, Short-term exposure, Systemic effects	700 mg/m ³
acetone		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	186 mg/kg bw/d
acetone		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	1,210 mg/m ³
acetone		Worker	Inhalation, Short-term exposure, Local effects	2,420 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
cyclohexane		Freshwater	0.207 mg/l
cyclohexane		Freshwater sediments	3.627 mg/kg d.w.
cyclohexane		Intermittent releases to water	0.207 mg/l
cyclohexane		Marine water	0.207 mg/l
acetone		Agricultural soil	29.5 mg/kg d.w.
acetone		Freshwater	10.6 mg/l
acetone		Freshwater sediments	30.4 mg/kg d.w.
acetone		Intermittent releases to water	21 mg/l
acetone		Marine water	1.06 mg/l
acetone		Marine water sediments	3.04 mg/kg d.w.
acetone		Sewage Treatment Plant	100 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

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:
 Safety glasses with side shields.
 Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

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

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

Applicable Norms/Standards

Use gloves tested to EN 374

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 vapor cartridges 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

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. aerosol
Specific Physical Form:	Aerosol
Colour	Colourless
Odor	Fruity Odor, Mild Solvent
Odour threshold	No data available.
Melting point/freezing point	No data available.
Boiling point/boiling range	Not applicable.
Flammability	Flammable Aerosol: Category 1.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Flash point	-41.1 °C [Test Method: Tagliabue closed cup]
Autoignition temperature	No data available.
Decomposition temperature	Not applicable.
pH	substance/mixture is non-soluble (in water)
Kinematic Viscosity	Not applicable.
Water solubility	Nil

Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	[Details:Compressed gas] <i>Not applicable.</i>
Density	0.726 g/ml
Relative density	0.726 [Ref Std:WATER=1]
Relative Vapour Density	2.97 [Ref Std:AIR=1]
Particle Characteristics	<i>Not applicable.</i>

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<i>No data available.</i>
Evaporation rate	1.9 [Ref Std:ETHER=1]
Percent volatile	<=75 % weight [Details:all volatiles]
Solids content	>=22.4 %

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.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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 internal hazard assessments.

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

Signs and Symptoms of Exposure

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

Inhalation

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

Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

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

Ingestion

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 Sensitization: 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.

Additional information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

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
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
Hexane, mix	Dermal		LD50 estimated to be > 5,000 mg/kg
Hexane, mix	Inhalation-		LC50 estimated to be > 50 mg/l

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	Vapour		
Hexane, mix	Ingestion		LD50 estimated to be > 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
Non-Volatile Components	Dermal		LD50 estimated to be > 5,000 mg/kg
Non-Volatile Components	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Terpene Phenolic	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Terpene Phenolic	Ingestion	Rat	LD50 > 7,000 mg/kg
Petroleum Resins	Ingestion	Rat	LD50 > 2,000 mg/kg
Petroleum Resins	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
ethanol	Inhalation-Vapour (4 hours)	Rat	LC50 124.7 mg/l
ethanol	Ingestion	Rat	LD50 17,800 mg/kg
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
Non-Volatile Resin	Ingestion	Mouse	LD50 > 2,000 mg/kg
toluene	Dermal	Rat	LD50 12,000 mg/kg
toluene	Inhalation-Vapour (4 hours)	Rat	LC50 30 mg/l
toluene	Ingestion	Rat	LD50 5,550 mg/kg
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
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Rat	LD50 3,125 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
propane	Rabbit	Minimal irritation
acetone	Mouse	Minimal irritation
Hexane, mix	Professional judgement	Mild irritant
cyclohexane	Rabbit	Mild irritant
Non-Volatile Components	Professional judgement	Minimal irritation
Petroleum Resins	In vitro data	No significant irritation
ethanol	Rabbit	No significant irritation

pentane	Rabbit	Minimal irritation
toluene	Rabbit	Irritant
n-hexane	Human and animal	Mild irritant
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
propane	Rabbit	Mild irritant
acetone	Rabbit	Severe irritant
Hexane, mix	Professional judgement	Moderate irritant
cyclohexane	Rabbit	Mild irritant
Petroleum Resins	In vitro data	No significant irritation
ethanol	Rabbit	Severe irritant
pentane	Rabbit	Mild irritant
toluene	Rabbit	Moderate irritant
n-hexane	Rabbit	Mild irritant
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Terpene Phenolic	Human	Some positive data exist, but the data are not sufficient for classification
Petroleum Resins	Mouse	Not classified
ethanol	Human	Not classified
pentane	Guinea pig	Not classified
toluene	Guinea pig	Not classified
n-hexane	Human	Not classified
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Guinea pig	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
propane	In Vitro	Not mutagenic
acetone	In vivo	Not mutagenic
acetone	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
Petroleum Resins	In Vitro	Not mutagenic
ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
pentane	In vivo	Not mutagenic
pentane	In Vitro	Some positive data exist, but the data are not sufficient for classification

toluene	In Vitro	Not mutagenic
toluene	In vivo	Not mutagenic
n-hexane	In Vitro	Not mutagenic
n-hexane	In vivo	Not mutagenic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	In vivo	Not mutagenic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
acetone	Not specified.	Multiple animal species	Not carcinogenic
ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
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
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
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
ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
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
toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
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 mg/kg/day	90 days
n-hexane	Inhalation	Toxic to male reproduction	Rat	LOAEL 3.52 mg/l	28 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,493 mg/kg/day	29 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Not classified for development	Rat	NOAEL 209 mg/kg/day	premating into lactation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	Toxic to female reproduction	Rat	NOAEL 804 mg/kg/day	premating into lactation

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	Not classified	Human	NOAEL 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
Hexane, mix	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Hexane, mix	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Hexane, mix	Inhalation	cardiac sensitisation	Not classified	Dog	NOAEL Not available	
Hexane, mix	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	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	Professional judgement	NOAEL Not available	
ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available

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ethanol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
ethanol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	
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	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
toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
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	13 weeks

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					2,500 mg/kg	
acetone	Ingestion	skin bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Hexane, mix	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 5.3 mg/l	14 weeks
Hexane, mix	Ingestion	peripheral nervous system	Not classified	Rat	NOAEL Not available	8 weeks
Hexane, mix	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 2,000 mg/kg	28 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
ethanol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
ethanol	Inhalation	hematopoietic system immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
ethanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
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
toluene	Inhalation	auditory system nervous system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
toluene	Inhalation	heart liver kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
toluene	Inhalation	hematopoietic system vascular system	Not classified	Human	NOAEL Not available	occupational exposure

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toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
toluene	Ingestion	liver kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
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
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	28 days
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Ingestion	gastrointestinal tract liver immune system heart endocrine system hematopoietic system nervous system kidney and/or bladder	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days

Aspiration Hazard

Name	Value
Hexane, mix	Aspiration hazard
cyclohexane	Aspiration hazard
pentane	Aspiration hazard
toluene	Aspiration hazard
n-hexane	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information

on this material and/or its components.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
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
propane	74-98-6	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
cyclohexane	110-82-7	Fathead minnow	Experimental	96 hours	LC50	4.53 mg/l
cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
cyclohexane	110-82-7	Bacteria	Experimental	24 hours	IC50	97 mg/l
Hexane, mix	601-007-00-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Non-Volatile Components	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Terpene Phenolic	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
ethanol	64-17-5	Fish	Experimental	96 hours	LC50	11,000 mg/l
ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
Non-Volatile Resin	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

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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
Petroleum Resins	64742-16-1	Green algae	Endpoint not reached	72 hours	EL50	>100 mg/l
Petroleum Resins	64742-16-1	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 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
toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
toluene	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9.5 mg/l
toluene	108-88-3	Green algae	Experimental	72 hours	EC50	12.5 mg/l
toluene	108-88-3	Leopard frog	Experimental	9 days	LC50	0.39 mg/l
toluene	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6.41 mg/l
toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
toluene	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1.39 mg/l
toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
toluene	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
toluene	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
toluene	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
toluene	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
toluene	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Activated sludge	Experimental	3 hours	IC50	>=100 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Green algae	Experimental	72 hours	ErC50	1.68 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Zebra Fish	Experimental	96 hours	LC50	0.9 mg/l
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	915-687-0	Green algae	Experimental	72 hours	NOEC	0.22 mg/l

piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate						
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Water flea	Experimental	21 days	NOEC	1 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
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)	
propane	74-98-6	Experimental Photolysis		Photolytic half-life (in air)	27.5 days (t 1/2)	
cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 %BOD/ThOD	OECD 301F - Manometric respirometry
cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.3 days (t 1/2)	
Hexane, mix	601-007-00-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Non-Volatile Components	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Terpene Phenolic	Trade Secret	Estimated Biodegradation	28 days	BOD	27.5 %BOD/ThOD	
ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
Non-Volatile Resin	Trade Secret	Estimated Biodegradation	28 days	CO2 evolution	24 %CO2 evolution/THC O2 evolution	Catalogic™
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)	
Petroleum Resins	64742-16-1	Estimated Biodegradation	28 days	CO2 evolution	18 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
n-hexane	110-54-3	Experimental Bioconcentration	28 days	BOD	100 %BOD/ThOD	OECD 301C - MITI test (I)
n-hexane	110-54-3	Experimental Photolysis		Photolytic half-life (in air)	5.4 days (t 1/2)	
toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	38 %removal of DOC	OECD 301E - Modif. OECD Screen

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
acetone	67-64-1	Experimental BCF - Other		Bioaccumulation factor	0.65	
acetone	67-64-1	Experimental Bioconcentration		Log Kow	-0.24	

propane	74-98-6	Experimental Bioconcentration		Log Kow	2.36	
cyclohexane	110-82-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	129	OECD305-Bioconcentration
cyclohexane	110-82-7	Experimental Bioconcentration		Log Kow	3.44	
Hexane, mix	601-007-00-7	Estimated Bioconcentration		Bioaccumulation factor	150	
Non-Volatile Components	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terpene Phenolic	Trade Secret	Estimated Bioconcentration		Bioaccumulation factor	18.9	
ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
Non-Volatile Resin	Trade Secret	Estimated BCF - Other		Bioaccumulation factor	7.9	Catalogic™
pentane	109-66-0	Estimated Bioconcentration		Bioaccumulation factor	26	
Petroleum Resins	64742-16-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
n-hexane	110-54-3	Modeled Bioconcentration		Bioaccumulation factor	50	Catalogic™
toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	31.4	

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
acetone	67-64-1	Modeled Mobility in Soil	Koc	9.7 l/kg	Episuite™
cyclohexane	110-82-7	Modeled Mobility in Soil	Koc	970 l/kg	Episuite™
pentane	109-66-0	Estimated Mobility in Soil	Koc	72 l/kg	Episuite™
toluene	108-88-3	Experimental Mobility in Soil	Koc	37-160 l/kg	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Modeled Mobility in Soil	Koc	200,000 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Dispose of waste product in a permitted industrial waste facility. Facility must be capable of handling aerosol cans.

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
20 01 27*	Paint, inks, adhesives and resins containing dangerous substances

EU waste code (product container after use)

15 01 04	Metallic packaging
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SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID 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 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.

ADR Classification Code	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

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
toluene	108-88-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. 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
toluene	108-88-3

Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

Regulation (EU) 2019/1148 (marketing and use of explosive precursors)

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see your local legislation.

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E2 Hazardous to the Aquatic environment	200	500
P3a FLAMMABLE AEROSOLS	150 (net)	500 (net)

Seveso named dangerous substances, Annex 1, Part 2
None

Regulation (EU) No 649/2012

No chemicals listed

15.2. Chemical Safety Assessment

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

SECTION 16: Other information**List of relevant H statements**

EUH066	Repeated exposure may cause skin dryness or cracking.
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.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
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.
H413	May cause long lasting harmful effects to aquatic life.

Revision information:

Section 8: Eye/face protection information information was modified.

Section 09: Odor information was modified.

Section 11: Health Effects - Skin information information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Mobility in soil information information was modified.

Section 12: Persistence and Degradability information information was modified.

Annex

1. Title	
Substance identification	cyclohexane; EC No. 203-806-2; CAS Nbr 110-82-7;
Exposure Scenario Name	Industrial Use of Adhesives
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 07 -Industrial spraying PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

	PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC 10 -Roller application or brushing PROC 13 -Treatment of articles by dipping and pouring 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 through a mixing nozzle Application of product with a roller or brush. Application of product with applicator gun. Spraying of substances/mixtures. Transfers with dedicated controls, including loading, filling, dumping, bagging. Transfers without dedicated controls, including loading, filling, dumping, bagging.
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 use: 8 hours/day; Emission days per year: <= 100 days per year; Task: PROC07; Indoors with good general ventilation;
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; ; The following task-specific risk management measures apply in addition to those listed above: Task: PROC08a; Human Health; Provide extract ventilation to points where emissions occur; Task: PROC08b; Human Health; Provide extract ventilation to points where emissions occur; Task: PROC10; Human Health; Provide extract ventilation to points where emissions occur;
Waste management measures	Do not apply industrial sludge to natural soils;
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	acetone; EC No. 200-662-2; CAS Nbr 67-64-1;
Exposure Scenario Name	Professional Use of Adhesives and Sealants
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) ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or

	onto article, outdoor)
Processes, tasks and activities covered	Spraying of substances/mixtures.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: ≤ 360 days per year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Goggles - Chemical resistant; Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour); Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed; ; The following task-specific risk management measures apply in addition to those listed above: Task: PROC11; Human Health; Local exhaust ventilation;
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	cyclohexane; EC No. 203-806-2; CAS Nbr 110-82-7;
Exposure Scenario Name	Professional Use of Adhesives and Sealants
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 10 -Roller application or brushing PROC 11 -Non industrial spraying PROC 13 -Treatment of articles by dipping and pouring ERC 08a -Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC 08d -Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
Processes, tasks and activities covered	Application of product with a roller or brush. Application of product with applicator gun. 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 use: 8 hours/day; Indoor use; Outdoor use; Task: PROC10; Indoors with good general ventilation; Task: Indoor spraying; Handle substance within a predominantly closed system provided with extract

	ventilation;
Risk management measures	<p>Under the operational conditions described above the following risk management measures apply:</p> <p>General risk management measures:</p> <p>Human health: None needed;</p> <p>Environmental: None needed;</p> <p>;</p> <p>The following task-specific risk management measures apply in addition to those listed above:</p> <p>Task: PROC10; Human Health; Air-purifying Half-Mask (with gas/vapour-cartridge, that can be combined with a particulate filter) (APF 10);</p> <p>Task: PROC11; Human Health; Air-purifying Half-Mask (with gas/vapour-cartridge, that can be combined with a particulate filter) (APF 10);</p> <p>Task: PROC13; Human Health; Provide extract ventilation to points where emissions occur;</p>
Waste management measures	Send to a municipal sewage treatment plant;
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.

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