Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

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

1.1. Product identifier
3M™ Dry Layup Adhesive 09092 and 09093, Red

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

Identified uses
Spray Adhesive

1.3. Details of the supplier of the safety data sheet

Address:	3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone:	+44 (0)1344 858 000
E Mail:	ner-productstewardship@mmm.com
Website:	www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.
Aspiration hazard classification does not apply due to the kinematic viscosity of the product.

CLASSIFICATION:
Flammable Liquid, Category 2 - Flam. Liq. 2; H225
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

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

SIGNAL WORD
DANGER.

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

Pictograms



Ingredient	CAS Nbr	EC No.	% by Wt
Hexane, mix	601-007-00-7		30 - 60
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	< 0.4

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
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.
P261I	Avoid breathing vapours, dust, or spray.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response:

P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Contains 11% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for GB
Hexane, mix	(CAS-No.) 601-007-00-7	30 - 60	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411 Nota C
Butadiene-Styrene Co-Polymer	Trade Secret	10 - 30	Substance not classified as hazardous
cyclohexane	(CAS-No.) 110-82-7 (EC-No.) 203-806-2	< 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
Resin acids, hydrogenated, esters or glycerol	Trade Secret	7 - 13	Substance with a national occupational exposure limit
Tackifier	Trade Secret	< 11	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	< 4	Flam. Liq. 2, H225 Eye Irrit. 2, H319
heptane	(CAS-No.) 142-82-5 (EC-No.) 205-563-8	< 1	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 Nota C
n-hexane	(CAS-No.) 110-54-3 (EC-No.) 203-777-6	< 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
4-methylpentan-2-one	(CAS-No.) 108-10-1 (EC-No.) 203-550-1	< 1	Flam. Liq. 2, H225 Acute Tox. 4, H332(LC50 = 11 mg/l **ATE values per GB MCL**) Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066
toluene	(CAS-No.) 108-88-3	< 1	Flam. Liq. 2, H225

	(EC-No.) 203-625-9		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	(CAS-No.) 915-687-0 (EC-No.) 915-687-0	< 0.4	Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1

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. If you feel unwell, get medical attention.

Skin contact
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed
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 GB CLP classification include:
Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

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

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

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot

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

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
4-methylpentan-2-one	108-10-1	UK HSE	TWA:208 mg/m3(50 ppm);STEL:416 mg/m3(100 ppm)	SKIN
toluene	108-88-3	UK HSE	TWA: 191 mg/m³ (50 ppm); STEL: 384 mg/m³ (100 ppm)	SKIN
pentane	109-66-0	UK HSE	TWA:1800 mg/m³(600 ppm)	
n-hexane	110-54-3	UK HSE	TWA:72 mg/m3(20 ppm)	
cyclohexane	110-82-7	UK HSE	TWA:350 mg/m³(100 ppm);STEL:1050 mg/m³(300 ppm)	
heptane	142-82-5	UK HSE	TWA:2085 mg/m3(500 ppm)	
ethanol	64-17-5	UK HSE	TWA:1920 mg/m³(1000 ppm)	
Resin acids, hydrogenated, esters or glycerol	Trade Secret	UK HSE	TWA(as fume):0.05 mg/m³;STEL(as fume):0.15 mg/m³	Respiratory Sensitizer

UK HSE : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values

Ingredient	CAS Nbr	Agency	Determinant	Biological Specimen	Sampling Time	Value	Additional comments
4-methylpentan-2-one	108-10-1	UK EH40 BMGVs	4-Methyl pentan-2-one	Urine	EOS	20 umol/L	

UK EH40 BMGVs : UK. EH40 Biological Monitoring Guidance Values (BMGVs)
EOS: End of shift.

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Applicable Norms/Standards
Use eye/face protection conforming to EN 166

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

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

Applicable Norms/Standards
Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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
Half facepiece or full facepiece supplied-air respirator

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 type A

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless

Odor	Solvent
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	60 ºC
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Flash point	<=-28.9 ºC
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-polar/aprotic*
Kinematic Viscosity	40 mm²/sec
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*No data available.*
Density	*No data available.*
Relative density	*No data available.*
Relative Vapour Density	*No data available.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds *No data available.*

Evaporation rate *No data available.*

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

Combustibles.

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 material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

Signs and Symptoms of Exposure

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

Inhalation
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): 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.

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

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

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
Hexane, mix	Dermal		LD50 estimated to be > 5,000 mg/kg
Hexane, mix	Inhalation-Vapour		LC50 estimated to be > 50 mg/l
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
Butadiene-Styrene Co-Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Butadiene-Styrene Co-Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Tackifier	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Resin acids, hydrogenated, esters or glycerol	Dermal	Rat	LD50 > 2,000 mg/kg
Resin acids, hydrogenated, esters or glycerol	Ingestion	Rat	LD50 > 2,000 mg/kg
Tackifier	Ingestion	Rat	LD50 > 7,000 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
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
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
heptane	Dermal	similar compounds	LD50 > 2,000 mg/kg
heptane	Inhalation-Vapour (4 hours)	similar compounds	LC50 > 33.5 mg/l
heptane	Ingestion	similar compounds	LD50 > 5,000 mg/kg
4-methylpentan-2-one	Dermal	Rabbit	LD50 > 16,000 mg/kg
4-methylpentan-2-one	Inhalation-Vapour (4 hours)	Rat	LC50 11 mg/l
4-methylpentan-2-one	Ingestion	Rat	LD50 3,038 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
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
Hexane, mix	Professional judgement	Mild irritant
cyclohexane	Rabbit	Mild irritant
Butadiene-Styrene Co-Polymer	Professional judgement	Minimal irritation
Resin acids, hydrogenated, esters or glycerol	Rabbit	No significant irritation
pentane	Rabbit	Minimal irritation
ethanol	Rabbit	No significant irritation
n-hexane	Human and animal	Mild irritant
heptane	Professional judgement	Mild irritant
4-methylpentan-2-one	Rabbit	Mild irritant
toluene	Rabbit	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
Hexane, mix	Professional judgement	Moderate irritant
cyclohexane	Rabbit	Mild irritant
Resin acids, hydrogenated, esters or glycerol	Rabbit	Mild irritant
pentane	Rabbit	Mild irritant
ethanol	Rabbit	Severe irritant
n-hexane	Rabbit	Mild irritant
heptane	similar compounds	Mild irritant
4-methylpentan-2-one	Rabbit	Mild irritant
toluene	Rabbit	Moderate 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
Resin acids, hydrogenated, esters or glycerol	Human and animal	Not classified
Tackifier	Human	Some positive data exist, but the data are not sufficient for classification
pentane	Guinea pig	Not classified
ethanol	Human	Not classified
n-hexane	Human	Not classified
heptane	similar compounds	Not classified
4-methylpentan-2-one	Guinea pig	Not classified

toluene	Guinea pig	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
cyclohexane	In Vitro	Not mutagenic
cyclohexane	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
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
n-hexane	In Vitro	Not mutagenic
n-hexane	In vivo	Not mutagenic
heptane	In Vitro	Not mutagenic
4-methylpentan-2-one	In Vitro	Not mutagenic
toluene	In Vitro	Not mutagenic
toluene	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
ethanol	Ingestion	Multiple animal species	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
4-methylpentan-2-one	Inhalation	Multiple animal species	Carcinogenic.
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

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
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
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
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
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
4-methylpentan-2-one	Inhalation	Not classified for female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-methylpentan-2-one	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-methylpentan-2-one	Inhalation	Not classified for male reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
4-methylpentan-2-one	Inhalation	Not classified for development	Mouse	NOAEL 12.3 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
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
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	
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
ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
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	
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
heptane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
heptane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
heptane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
4-methylpentan-2-one	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
4-methylpentan-2-one	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
4-methylpentan-2-one	Inhalation	vascular system	Not classified	Dog	NOAEL Not available	not available
4-methylpentan-2-one	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable
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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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
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
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
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 |	Not classified	Rat	NOAEL Not	13 weeks

		hematopoietic system | liver | immune system | kidney and/or bladder			available	
heptane	Inhalation	nervous system	Not classified	Rat	NOAEL 6.15 mg/l	30 weeks
heptane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 12.5 mg/l	16 weeks
heptane	Inhalation	hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 12.2 mg/l	26 weeks
4-methylpentan-2-one	Inhalation	liver	Not classified	Rat	NOAEL 0.41 mg/l	13 weeks
4-methylpentan-2-one	Inhalation	heart	Not classified	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
4-methylpentan-2-one	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 0.4 mg/l	90 days
4-methylpentan-2-one	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
4-methylpentan-2-one	Inhalation	endocrine system | hematopoietic system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	90 days
4-methylpentan-2-one	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
4-methylpentan-2-one	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4-methylpentan-2-one	Ingestion	heart | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 1,040 mg/kg/day	120 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
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
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
n-hexane	Aspiration hazard
heptane	Aspiration hazard
4-methylpentan-2-one	Some positive data exist, but the data are not sufficient for classification
toluene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

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

SECTION 12: Ecological information

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

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Hexane, mix	601-007-00-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Butadiene-Styrene Co-Polymer	Trade Secret	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

Resin acids, hydrogenated, esters or glycerol	Trade Secret	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids, hydrogenated, esters or glycerol	Trade Secret	Rainbow trout	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids, hydrogenated, esters or glycerol	Trade Secret	Water flea	Analogous Compound	48 hours	No tox obs at lmt of water sol	>100 mg/l
Resin acids, hydrogenated, esters or glycerol	Trade Secret	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Tackifier	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
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
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
heptane	142-82-5	Water flea	Experimental	48 hours	EC50	1.5 mg/l
heptane	142-82-5	Water flea	Estimated	21 days	NOEC	0.17 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
4-methylpentan-2-one	108-10-1	Green algae	Experimental	96 hours	EC50	400 mg/l
4-methylpentan-2-one	108-10-1	Water flea	Experimental	48 hours	EC50	>200 mg/l
4-methylpentan-2-one	108-10-1	Zebra Fish	Experimental	96 hours	LC50	>179 mg/l
4-methylpentan-2-one	108-10-1	Fathead minnow	Experimental	32 days	NOEC	56.2 mg/l
4-methylpentan-2-one	108-10-1	Water flea	Experimental	21 days	NOEC	78 mg/l
4-methylpentan-2-one	108-10-1	Activated sludge	Experimental	30 minutes	EC50	>1,000
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	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 and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	Green algae	Experimental	72 hours	ErC10	0.34 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	Water flea	Experimental	21 days	NOEC	1 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	Activated sludge	Experimental	3 hours	IC50	>=100 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Hexane, mix	601-007-00-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Butadiene-Styrene Co-Polymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 %BOD/ThOD	OECD 301F - Manometric respirometry
cyclohexane	110-82-7	Experimental		Photolytic half-life	4.3 days (t 1/2)	

		Photolysis		(in air)		
Resin acids, hydrogenated, esters or glycerol	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	47.3 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Tackifier	Trade Secret	Estimated Biodegradation	28 days	BOD	27.5 %BOD/ThOD	
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)	
ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
heptane	142-82-5	Experimental Biodegradation	28 days	BOD	101 %BOD/ThOD	OECD 301C - MITI test (I)
heptane	142-82-5	Experimental Photolysis		Photolytic half-life (in air)	4.24 days (t 1/2)	
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)	
4-methylpentan-2-one	108-10-1	Experimental Biodegradation	28 days	BOD	83 %BOD/ThOD	OECD 301F - Manometric respirometry
4-methylpentan-2-one	108-10-1	Experimental Photolysis		Photolytic half-life (in air)	2.3 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
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 Hydrolysis		Hydrolytic half-life (pH 7)	68 days (t 1/2)	OECD 111 Hydrolysis func of pH

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Hexane, mix	601-007-00-7	Estimated Bioconcentration		Bioaccumulation factor	150	
Butadiene-Styrene Co-Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
cyclohexane	110-82-7	Experimental BCF - Fish	56 days	Bioaccumulation factor	129	OECD305-Bioconcentration
cyclohexane	110-82-7	Experimental Bioconcentration		Log Kow	3.44	
Resin acids, hydrogenated, esters or glycerol	Trade Secret	Analogous Compound BCF - Fish	20 days	Bioaccumulation factor	≤129	
Resin acids, hydrogenated, esters or glycerol	Trade Secret	Experimental Bioconcentration		Log Kow	5.8	OECD 117 log Kow HPLC method
Tackifier	Trade Secret	Estimated Bioconcentration		Bioaccumulation factor	18.9	
pentane	109-66-0	Estimated Bioconcentration		Bioaccumulation factor	26	

ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
heptane	142-82-5	Estimated Bioconcentration		Bioaccumulation factor	105	
n-hexane	110-54-3	Modeled Bioconcentration		Bioaccumulation factor	50	Catalogic™
4-methylpentan-2-one	108-10-1	Experimental Bioconcentration		Log Kow	1.9	OECD 117 log Kow HPLC method
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	
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 Bioconcentration		Log Kow	2.77	OECD 107 log Kow shke flsk mtd

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
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™
4-methylpentan-2-one	108-10-1	Modeled Mobility in Soil	Koc	150 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	7 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. Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal

facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

EU waste code (product as sold)

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN1133	UN1133	UN1133
14.2 UN proper shipping name	ADHESIVES	ADHESIVES	ADHESIVES
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
14.5 Environmental hazards	Not Environmentally Hazardous	Not applicable	Not a Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	F1	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
4-methylpentan-2-one	108-10-1	Carc. 2	The retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain, UK Mandatory Classification and Labelling list
4-methylpentan-2-one	108-10-1	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
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 to Annex XVII of regulation (EC) 1907/2006, as amended for GB, with regard to restrictions on the manufacture, placing on the market and use when present in certain dangerous conditions. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

Ingredient	CAS Nbr
cyclohexane	110-82-7
toluene	108-88-3

Restriction status: listed in UK REACH Annex XVII
Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 as amended for Great Britain for Conditions of Restriction

Global inventory status
Contact 3M for more information. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

COMAH Regulation, SI 2015/483
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
P5c FLAMMABLE LIQUIDS*	5000	50000

*If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply

Seveso named dangerous substances, Annex 1, Part 2
None

Regulation (EU) No 649/2012, as amended for GB
No chemicals listed

15.2. Chemical Safety Assessment
A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended for GB.

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
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.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
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.

Revision information:
GB Section 02: CLP Ingredient table information was modified.
GB Section 15: Carcinogenicity information information was modified.
Section 1: E-mail address information was modified.
Label: CLP Precautionary - Prevention information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Occupational exposure limit table information was modified.
OEL Reg Agency Desc information was modified.
Section 08: Personal Protection - Apron Statement information was added.
Section 8: Personal Protection - Skin/body information information was deleted.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 8: Skin protection - protective clothing information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table 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.
Section 12:Bioccumulative potential information information was modified.

Section 15: Seveso Substance Text information was deleted.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

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

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