



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Super 77™ Adhesive, Bulk

#### Product Identification Numbers

62-4458-8530-4

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Adhesive, Industrial use.

For Industrial or Professional use only

#### 1.3. Supplier's details

**Address:** 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland  
**Telephone:** (09) 477 4040  
**E Mail:** innovation@nz.mmm.com  
**Website:** 3m.co.nz

#### 1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

### SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.

Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

#### 2.1. Classification of the substance or mixture

Flammable Liquid: Category 2  
Serious Eye Damage/Irritation: Category 2  
Skin Sensitizer: Category 1A.  
Reproductive Toxicity: Category 1B  
Specific Target Organ Toxicity (single exposure): Category 3

#### 2.2. Label elements

**SIGNAL WORD**

Danger

**Symbols:**

Flame |Exclamation mark |Health Hazard |

**Pictograms**



**HAZARD STATEMENTS:**

- H225 Highly flammable liquid and vapour.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.
- H360 May damage fertility or the unborn child.
- H336 May cause drowsiness or dizziness.

**PRECAUTIONARY STATEMENTS**

**Prevention**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof electrical, ventilating and lighting equipment.
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharges.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280K Wear protective gloves and respiratory protection.

**Response**

- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTRE or doctor/physician if you feel unwell.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337 + P313 IF eye irritation persists: Get medical advice/attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P370 + P378 In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage**

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal**

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

**2.3. Other hazards**

Aspiration classification does not apply due to the viscosity of the product.

**SECTION 3: Composition/information on ingredients**

Ingredient	CAS Nbr	% by Weight
2-Methylpentane	107-83-5	30 - 45
Non-Volatile Components	Trade Secret	20 - 40
Cyclohexane	110-82-7	15 - 24
Terpene Phenolic	Trade Secret	< 15
Petroleum Resins	64742-16-1	< 10
Ethanol	64-17-5	< 5
Pentane	109-66-0	< 5
Non-Volatile Resin	Trade Secret	< 5
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	41556-26-7	< 0.5
Hexane	110-54-3	< 0.5
Toluene	108-88-3	< 0.5

**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.

A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

**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:

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable 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

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.

### 5.3. Special protective actions 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.

5.4. Hazchem code: -3YE

## 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 vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

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

### 6.3. Methods and material for containment and cleaning up

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 in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

Refer to Section 15 - Controls for more information

### 7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. 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 vapor 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. Certified handler

Not required

## 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
2-Methylpentane	107-83-5	ACGIH	TWA:500 ppm;STEL:1000 ppm	
Hexane (isomers other than n-hexane)	107-83-5	New Zealand WES	TWA(8 hours): 1760 mg/m3 (500 ppm); STEL(15 minutes): 3500 mg/m3 (1000 ppm)	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcinogen, Ototoxicant
Toluene	108-88-3	New Zealand WES	TWA(8 hours): 188 mg/m3 (50 ppm)	Skin
Pentane	109-66-0	ACGIH	TWA:1000 ppm	
Pentane	109-66-0	New Zealand WES	TWA(8 hours): 1770 mg/m3 (600 ppm); STEL(15 minutes): 2120 mg/m3 (750 ppm)	
Hexane	110-54-3	ACGIH	TWA:50 ppm	Danger of cutaneous absorption
Hexane	110-54-3	New Zealand WES	TWA(8 hours): 72 mg/m3 (20 ppm)	
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Cyclohexane	110-82-7	New Zealand WES	TWA(8 hours):350 mg/m3(100 ppm);STEL(15 minutes):1050 mg/m3(300 ppm)	
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	New Zealand WES	TWA(8 hours):1880 mg/m3(1000 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

New Zealand WES : New Zealand Workplace Exposure Standards.

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

ppm: parts per million

mg/m<sup>3</sup>: milligrams per cubic metre

CEIL: Ceiling

### 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.

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

**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: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

**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 vapors and particulates

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

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colorless
<b>Odour</b>	Solvent
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	>=69 °C [ <i>Details:Hexane</i> ]
<b>Flash point</b>	-28.9 °C [ <i>Test Method:Closed Cup</i> ]
<b>Evaporation rate</b>	>=1 [ <i>Ref.Std:BUOAC=1</i> ]
<b>Flammability (solid, gas)</b>	Not applicable.

<b>Flammable Limits(LEL)</b>	1.2 % volume
<b>Flammable Limits(UEL)</b>	8 % volume
<b>Vapour pressure</b>	<=31,330.7 Pa [@ 25 °C ]
<b>Vapor Density and/or Relative Vapor Density</b>	>=1 [Ref Std: AIR=1]
<b>Density</b>	0.78 g/ml
<b>Relative density</b>	0.78 [Ref Std: WATER=1]
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	No data available.
<b>Partition coefficient: n-octanol/water</b>	No data available.
<b>Autoignition temperature</b>	No data available.
<b>Decomposition temperature</b>	No data available.
<b>Viscosity/Kinematic Viscosity</b>	200 - 5,000 mPa-s [@ 23 °C ]
<b>Volatile organic compounds (VOC)</b>	
<b>Percent volatile</b>	
<b>VOC less H2O &amp; exempt solvents</b>	<=554 g/l [Test Method: calculated SCAQMD rule 443.1]
<b>Molecular weight</b>	No data available.
<b>Solids content</b>	30 - 40 %

**Nanoparticles**

This material does not contain nanoparticles.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

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

**10.2 Chemical stability**

Stable.

**10.3 Possibility of hazardous reactions**

Hazardous polymerisation will not occur.

**10.4 Conditions to avoid**

Heat.

Sparks and/or flames.

**10.5 Incompatible materials**

Strong oxidising agents.

**10.6 Hazardous decomposition products****Substance**

None known.

**Condition**

Refer to Section 5.2 for hazardous decomposition products during combustion.

**SECTION 11: Toxicological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

## 11.1 Information on Toxicological effects

### Signs and Symptoms of Exposure

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

#### Inhalation

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 localized 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.

#### 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-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
2-Methylpentane	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Methylpentane	Inhalation-Vapor		LC50 estimated to be > 50 mg/l
2-Methylpentane	Ingestion		LD50 estimated to be > 5,000 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohexane	Inhalation-Vapor (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
Petroleum Resins	Dermal	Rabbit	LD50 > 2,000 mg/kg
Petroleum Resins	Ingestion	Rat	LD50 > 5,000 mg/kg
Pentane	Dermal	Rabbit	LD50 3,000 mg/kg
Pentane	Inhalation-Vapor (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-Vapor (4 hours)	Rat	LC50 124.7 mg/l
Ethanol	Ingestion	Rat	LD50 17,800 mg/kg
Non-Volatile Resin	Ingestion	Mouse	LD50 > 2,000 mg/kg
Hexane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hexane	Inhalation-Vapor (4 hours)	Rat	LC50 170 mg/l
Hexane	Ingestion	Rat	LD50 > 28,700 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	Ingestion	Rat	LD50 3,125 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
2-Methylpentane	Professional judgement	Mild irritant
Cyclohexane	Rabbit	Mild irritant
Non-Volatile Components	Professional judgement	Minimal irritation
Petroleum Resins	Human	Minimal irritation
Pentane	Rabbit	Minimal irritation
Ethanol	Rabbit	No significant irritation
Hexane	Human and animal	Mild irritant
Toluene	Rabbit	Irritant
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
2-Methylpentane	Professional judgement	Moderate irritant
Cyclohexane	Rabbit	Mild irritant
Petroleum Resins	Human	Mild irritant
Pentane	Rabbit	Mild irritant
Ethanol	Rabbit	Severe irritant
Hexane	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant

Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	Rabbit	No significant irritation
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**Sensitisation:****Skin Sensitisation**

Name	Species	Value
Pentane	Guinea pig	Not classified
Ethanol	Human	Not classified
Hexane	Human	Not classified
Toluene	Guinea pig	Not classified
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	Guinea pig	Sensitising

**Photosensitisation**

Name	Species	Value
Petroleum Resins	Human	Not sensitizing

**Respiratory Sensitisation**

For the component/components, either no data are currently available or the data are 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
Petroleum Resins	In vivo	Not mutagenic
Petroleum Resins	In Vitro	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
Hexane	In Vitro	Not mutagenic
Hexane	In vivo	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Petroleum Resins	Not specified.	Human and animal	Some positive data exist, but the data are not sufficient for classification
Ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Hexane	Dermal	Mouse	Not carcinogenic
Hexane	Inhalation	Mouse	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

## 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	prematuring & during gestation
Hexane	Ingestion	Not classified for development	Mouse	NOAEL 2,200 mg/kg/day	during organogenesis
Hexane	Inhalation	Not classified for development	Rat	NOAEL 0.7 mg/l	during gestation
Hexane	Ingestion	Toxic to male reproduction	Rat	NOAEL 1,140 mg/kg/day	90 days
Hexane	Inhalation	Toxic to male reproduction	Rat	LOAEL 3.52 mg/l	28 days
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

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2-Methylpentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
2-Methylpentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2-Methylpentane	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL Not available	
2-Methylpentane	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 sensitization	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	
Hexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL Not available	8 hours
Hexane	Inhalation	respiratory system	Not classified	Rat	NOAEL 24.6 mg/l	8 hours
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
2-Methylpentane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 5.3 mg/l	14 weeks
2-Methylpentane	Ingestion	peripheral nervous system	Not classified	Rat	NOAEL Not available	8 weeks
2-Methylpentane	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
Petroleum Resins	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
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
Hexane	Inhalation	peripheral nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Hexane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 1.76 mg/l	13 weeks
Hexane	Inhalation	liver	Not classified	Rat	NOAEL Not available	6 months
Hexane	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.76 mg/l	6 months
Hexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 35.2 mg/l	13 weeks
Hexane	Inhalation	auditory system   immune system   eyes	Not classified	Human	NOAEL Not available	occupational exposure
Hexane	Inhalation	heart   skin   endocrine system	Not classified	Rat	NOAEL 1.76 mg/l	6 months
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
Hexane	Ingestion	endocrine system   hematopoietic system   liver   immune system   kidney and/or bladder	Not classified	Rat	NOAEL Not available	13 weeks
Toluene	Inhalation	auditory system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause damage to organs though 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

**Aspiration Hazard**

Name	Value
2-Methylpentane	Aspiration hazard
Cyclohexane	Aspiration hazard
Pentane	Aspiration hazard
Hexane	Aspiration hazard
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.

**SECTION 12: Ecological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

**12.1. Toxicity**

**Ecotoxic to the aquatic environment.**

Acute Aquatic Toxicity: Category 2 (HSNO 9.1D Aquatic toxicity)

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
2-Methylpentane	107-83-5		Data not available or insufficient for classification			N/A
Non-Volatile Components	Trade Secret		Data not available or insufficient for classification			N/A
Cyclohexane	110-82-7	Bacteria	Experimental	24 hours	IC50	97 mg/l
Cyclohexane	110-82-7	Fathead	Experimental	96 hours	LC50	4.53 mg/l

		minnow				
Cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
Terpene Phenolic	Trade Secret		Data not available or insufficient for classification			N/A
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
Ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethanol	64-17-5	Fish other	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		Data not available or insufficient for classification			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
Bis(1,2,2,6,6- pentamethyl-4- piperidinyloxy) sebacate	41556-26-7	Green algae	Estimated	72 hours	EC50	1.68 mg/l
Bis(1,2,2,6,6- pentamethyl-4- piperidinyloxy) sebacate	41556-26-7	Water flea	Estimated	24 hours	EC50	20 mg/l
Bis(1,2,2,6,6- pentamethyl-4- piperidinyloxy) sebacate	41556-26-7	Zebra Fish	Estimated	96 hours	LC50	0.9 mg/l
Bis(1,2,2,6,6- pentamethyl-4- piperidinyloxy) sebacate	41556-26-7	Green algae	Estimated	72 hours	EC10	0.34 mg/l
Bis(1,2,2,6,6- pentamethyl-4- piperidinyloxy) sebacate	41556-26-7	Water flea	Estimated	21 days	NOEC	1 mg/l
Hexane	110-54-3	Fathead minnow	Experimental	96 hours	LC50	2.5 mg/l
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)

## 12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Methylpentane	107-83-5	Data not available - insufficient			N/A	
Non-Volatile Components	Trade Secret	Data not available - insufficient			N/A	
Cyclohexane	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.14 days (t 1/2)	Non-standard method
Cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 % BOD/ThBOD	OECD 301F - Manometric respirometry
Terpene Phenolic	Trade Secret	Estimated Biodegradation	28 days	BOD	27.5 % BOD/ThBOD	Non-standard method
Petroleum Resins	64742-16-1	Estimated Biodegradation	28 days	CO2 evolution	18 % CO2 evolution/THC O2 evolution	OECD 301B - Modified Sturm or CO2
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 % BOD/ThBOD	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 Photolysis		Photolytic half-life (in air)	8.07 days (t 1/2)	Non-standard method
Pentane	109-66-0	Experimental Biodegradation	28 days	BOD	87 % BOD/ThBOD	OECD 301F - Manometric respirometry
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	41556-26-7	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	38 % removal of DOC	OECD 301E - Modif. OECD Screen
Hexane	110-54-3	Experimental Photolysis		Photolytic half-life (in air)	5.4 days (t 1/2)	Non-standard method
Hexane	110-54-3	Experimental Bioconcentration	28 days	BOD	100 % weight	OECD 301C - MITI test (I)
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
Toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 % BOD/ThBOD	APHA Std Meth Water/Wastewater



**12.3 : Bioaccumulative potential**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Methylpentane	107-83-5	Estimated Bioconcentration		Bioaccumulation factor	150	Estimated: Bioconcentration factor
Non-Volatile Components	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Cyclohexane	110-82-7	Experimental BCF-Carp	56 days	Bioaccumulation factor	129	OECD 305E - Bioaccumulation flow-through fish test
Terpene Phenolic	Trade Secret	Estimated Bioconcentration		Bioaccumulation factor	18.9	Estimated: Bioconcentration factor
Petroleum Resins	64742-16-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	Non-standard method
Non-Volatile Resin	Trade Secret	Estimated BCF - Other		Bioaccumulation factor	7.9	Catalogic™
Pentane	109-66-0	Estimated Bioconcentration		Bioaccumulation factor	26	Estimated: Bioconcentration factor
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	41556-26-7	Experimental BCF-Carp	56 days	Bioaccumulation factor	<31.4	Non-standard method
Hexane	110-54-3	Estimated Bioconcentration		Bioaccumulation factor	50	Estimated: Bioconcentration factor
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5 Other adverse effects**

No information available.

## SECTION 13: Disposal considerations

**13.1. Disposal methods**

In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

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.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

## **SECTION 14: Transport Information**

### **New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport**

**UN No.:** UN1133

**Proper Shipping Name:** ADHESIVES

**Class/Division:** 3

**Sub Risk:** Not applicable.

**Packing Group:** II

**Hazchem Code:** -3YE

**IERG:** 14

### **International Air Transport Association (IATA) - Air Transport**

**UN No.:** UN1133

**Proper Shipping Name:** ADHESIVES

**Class/Division:** 3

**Sub Risk:** Not applicable.

**Packing Group:** II

**Special Instructions:**Forbidden packaging does not meet requirements for this mode of transport

### **International Maritime Dangerous Goods Code (IMDG) - Marine Transport**

**UN No.:** UN1133

**Proper Shipping Name:** ADHESIVES

**Class/Division:** 3

**Sub Risk:** Not applicable.

**Packing Group:** II

**Marine Pollutant:** Not applicable.

## **SECTION 15: Regulatory information**

HSNO Approval number HSR002662

Group standard name Surface Coatings and Colourants (Flammable) Group Standard 2020

HSNO Hazard classification Refer to Section 2: Hazard identification

### **NZ Inventory of Chemicals (NZIoC) Status**

All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

### **Controls in accordance with The Health and Safety at Work Act 2015, Health and Safety at Work (Hazardous Substances) Regulations 2017 and the HSNO Act 1996, Hazardous Substances (Hazardous Property Controls) Notice 2017**

Certified handler	Not required
Location Compliance Certificate	100 L (closed containers greater than 5 L) 250 L (closed containers up to and including 5 L) 50 L (open containers)
Hazardous atmosphere zone	100 L (closed containers) 25 L (decanting) 5 L (open occasionally) 1 L (open containers in continuous use)
Fire extinguishers	Two required for 250 L
Emergency response plan	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1

Secondary containment	000 L (for all other substances) 100 L (for Hazardous to the aquatic environment Category 1 substances); or 1000 L (for all other substances)
Tracking	Not required
Warning signage	100 L (for Hazardous to the aquatic environment Category 1 substances); or 250 L (for all other substances)

**SECTION 16: Other information****Revision information:**

Complete document review.

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**Key to abbreviations and acronyms****GHS** refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017**HSNO** means Hazardous Substances and New Organisms Act 1996

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