

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

3MTM Foam Fast 74 Spray Adhesive Orange

Product Identification Numbers

62-4935-4950-5

1.2. Recommended use and restrictions on use

Recommended use

Adhesive. Aerosol foam adhesive

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 Aerosol: Category 1 Gas Under Pressure: Liquefied gas Serious Eye Damage/Irritation: Category 1 Reproductive Toxicity: Category 1B

Specific Target Organ Toxicity (single exposure): Category 1 Specific Target Organ Toxicity (single exposure): Category 3

Chronic Aquatic Toxicity: Category 3

2.2. Label elements SIGNAL WORD

Danger

Symbols:

Flame | Gas cylinder | Corrosion | Exclamation mark | Health Hazard |

Pictograms



HAZARD STATEMENTS:

H222 Extremely flammable aerosol.

H229 Pressurized container: may burst if heated.

H280 Contains gas under pressure; may explode if heated.

H318 Causes serious eye damage.

H360 May damage fertility or the unborn child. H336 May cause drowsiness or dizziness.

H370 Causes damage to organs: cardiovascular system.

H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

General

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

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.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment. P280F Wear respiratory protection.

Response

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.

P310 Immediately call a POISON CENTER or doctor/physician.

Storage

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

P405 Store locked up.

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P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50oC.

Disposal

P501 Dispose of contents/container in accordance with applicable

local/regional/national/international regulations.

2.3. Other hazards

A similar mixture has been tested for eye damage/irritation and the test results are reflected in the assigned classification. A similar mixture has been tested for skin corrosion/irritation and the test results are reflected in the assigned classification. Aspiration classification does not apply as this product is sold in sealed, self-pressurized containers with nozzles designed to prevent formation of a stream during usage. Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal. May displace oxygen and cause rapid suffocation.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Acetone	67-64-1	15 - 25
Dimethyl Ether	115-10-6	15 - 25
Isobutane	75-28-5	10 - 20
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	31393-98-3	5 - 15
Non-hazardous components	Trade Secret	5 - 15
Pentane	109-66-0	7 - 13
Methyl acetate	79-20-9	3 - 7
Cyclohexane	110-82-7	1 - 5
Petroleum naphtha	64742-48-9	1 - 3
Toluene	108-88-3	< 1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. Get medical attention.

Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eve contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

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

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

SubstanceConditionHydrocarbons.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.

5.4. Hazchem code: 2YE

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. 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

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Contain spill. Cover spill area with a fire-extinguishing foam. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. 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. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. 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
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)	
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)	
Dimethyl Ether	115-10-6	AIHA	TWA:1880 mg/m3(1000 ppm)	
Dimethyl Ether	115-10-6	New Zealand WES	TWA(8 hours): 766 mg/m3 (400 ppm); STEL(15 minutes): 958 mg/m3 (500 ppm)	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human carcinogin
Acetone	67-64-1	New Zealand WES	TWA(8 hours):1185 mg/m3(500 ppm);STEL(15 minutes):2375 mg/m3(1000 ppm)	
Isobutane	75-28-5	ACGIH	STEL:1000 ppm	
Natural gas	75-28-5	ACGIH	Limit value not established:	asphyxiant
Methyl acetate	79-20-9	ACGIH	TWA:200 ppm;STEL:250 ppm	
Methyl acetate	79-20-9	New Zealand WES	TWA(8 hours):606 mg/m3(200 ppm);STEL(15 minutes):757 mg/m3(250 ppm)	
ACCIII : American Conference of	Carrammantal Industrial	Hiraionista		

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/m³: milligrams per cubic metre

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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.

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:

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

Half facepiece or full facepiece supplied-air respirator.

Organic vapor respirators may have short service life.

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

Physical state	Liquid.
Specific Physical Form:	Aerosol
Colour	Orange
Odour	Sweet Odour, Fruity Odour
Odour threshold	No data available.
рН	No data available.
Melting point/Freezing point	No data available.

Boiling point/Initial boiling point/Boiling range	[Details:Compressed gas]Not applicable.		
Flash point	-45.6 °C [Test Method: Tagliabue closed cup]		
Evaporation rate	1.9 [Ref Std:ETHER=1]		
Flammability (solid, gas)	Not applicable.		
Flammable Limits(LEL)	No data available.		
Flammable Limits(UEL)	No data available.		
Vapour pressure	[Details:Compressed gas]Not applicable.		
Vapor Density and/or Relative Vapor Density	2.97 [<i>Ref Std</i> :AIR=1]		
Density	0.718 g/ml		
Relative density	0.718 [<i>Ref Std</i> :WATER=1]		
Water solubility	Nil		
Solubility- non-water	No data available.		
Partition coefficient: n-octanol/water	No data available.		
Autoignition temperature	No data available.		
Decomposition temperature	No data available.		
Viscosity/Kinematic Viscosity	Not applicable.		
Volatile organic compounds (VOC)	<=395 g/l [Test Method:calculated SCAQMD rule 443.1]		
	[Details:Material VOC]		
Volatile organic compounds (VOC)	<=55 % [Test Method:calculated per CARB title 2]		
Percent volatile	No data available.		
VOC less H2O & exempt solvents	No data available.		
Molecular weight	No data available.		

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.

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

Simple asphyxiation: Signs/symptoms may include increased heart rate, rapid respirations, drowsiness, headache, incoordination, altered judgement, nausea, vomiting, lethargy, seizures, coma, and may be fatal. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eve contact

Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion

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

Additional Health Effects:

Single exposure may cause target organ effects:

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness. Single exposure, above recommended guidelines, may cause: Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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
Isobutane	Inhalation- Gas (4 hours)	Rat	LC50 276,000 ppm
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation- Vapor (4 hours)	Rat	LC50 76 mg/l
Acetone	Ingestion	Rat	LD50 5,800 mg/kg
Dimethyl Ether	Inhalation-	Rat	LC50 164,000 ppm

	Gas (4 hours)		
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
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	Dermal	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	Ingestion	Rat	LD50 > 2,000 mg/kg
Non-hazardous components	Dermal	Rabbit	LD50 > 2,000 mg/kg
Non-hazardous components	Ingestion	Rat	LD50 > 5,000 mg/kg
Methyl acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Methyl acetate	Inhalation- Vapor (4 hours)	Rat	LC50 > 49 mg/l
Methyl acetate	Ingestion	Rat	LD50 > 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
Petroleum naphtha	Inhalation- Vapor		LC50 estimated to be 20 - 50 mg/l
Petroleum naphtha	Dermal	Rabbit	LD50 > 3,000 mg/kg
Petroleum naphtha	Ingestion	Rat	LD50 > 5,000 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

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	Mild irritant
Isobutane	Professio	No significant irritation
	nal	
	judgemen	
	t	
Acetone	Mouse	Minimal irritation
Pentane	Rabbit	Minimal irritation
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-	In vitro	No significant irritation
methylenebicyclo[3.1.1]heptane	data	
Non-hazardous components	Professio	No significant irritation
	nal	
	judgemen	
	t	
Methyl acetate	Rabbit	No significant irritation
Cyclohexane	Rabbit	Mild irritant
Petroleum naphtha	Rabbit	Irritant
Toluene	Rabbit	Irritant

Serious Eve Damage/Irritation

Name	Species	Value
Overall product	Rabbit	Corrosive
Isobutane	Professio nal judgemen t	No significant irritation

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Acetone	Rabbit	Severe irritant
Pentane	Rabbit	Mild irritant
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-	In vitro	No significant irritation
methylenebicyclo[3.1.1]heptane	data	
Methyl acetate	Rabbit	Moderate irritant
Cyclohexane	Rabbit	Mild irritant
Petroleum naphtha	Rabbit	No significant irritation
Toluene	Rabbit	Moderate irritant

Sensitisation:

Skin Sensitisation

Name	Species	Value
Pentane	Guinea pig	Not classified
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	Multiple animal species	Not classified
Methyl acetate	Human	Not classified
Petroleum naphtha	Guinea pig	Not classified
Toluene	Guinea pig	Not classified

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
Isobutane	In Vitro	Not mutagenic
Acetone	In vivo	Not mutagenic Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dimethyl Ether	In Vitro	Not mutagenic
Dimethyl Ether	In vivo	Not mutagenic
Pentane	In vivo	Not mutagenic
Pentane	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene, polymer with 6,6-dimethyl-2-methylenebicyclo[3.1.1]heptane	In Vitro	Not mutagenic
Methyl acetate	In Vitro	Not mutagenic
Methyl acetate	In vivo	Not mutagenic
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
Petroleum naphtha	In vivo	Not mutagenic
Petroleum naphtha	In Vitro	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Acetone	Not	Multiple	Not carcinogenic
	specified.	animal	
		species	
Dimethyl Ether	Inhalation	Rat	Not carcinogenic
Petroleum naphtha	Dermal	Mouse	Some positive data exist, but the data are not
			sufficient for classification
Petroleum naphtha	Inhalation	Human	Some positive data exist, but the data are not
		and	sufficient for classification

		animal	
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
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
Dimethyl Ether	Inhalation	Not classified for development	Rat	NOAEL 40,000 ppm	during organogenesis
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
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
Petroleum naphtha	Inhalation	Not classified for development	Rat	NOAEL 2.4 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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Isobutane	Inhalation	cardiac sensitization	Causes damage to organs	Multiple animal species	NOAEL Not available	
Isobutane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Isobutane	Inhalation	respiratory irritation	Not classified	Mouse	NOAEL Not available	
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous	May cause drowsiness or	Human	NOAEL Not	poisoning

		system depression	dizziness		available	and/or abuse
Dimethyl Ether	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 10,000 ppm	30 minutes
Dimethyl Ether	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 100,000 ppm	5 minutes
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	Professio nal judgeme nt	NOAEL Not available	not available
Methyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Methyl acetate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Methyl acetate	Inhalation	blindness	Not classified		NOAEL Not available	
Methyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Petroleum naphtha	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Petroleum naphtha	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Petroleum naphtha	Inhalation	nervous system	Not classified	Dog	NOAEL 6.5 mg/l	4 hours
Petroleum naphtha	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Isobutane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 4,500 ppm	13 weeks
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks

Acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	mg/kg/day NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Dimethyl Ether	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 25,000 ppm	2 years
Dimethyl Ether	Inhalation	liver	Not classified	Rat	NOAEL 20,000 ppm	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
2,6,6- Trimethylbicyclo[3.1.1]he pt-2-ene, polymer with 6,6-dimethyl-2- methylenebicyclo[3.1.1]he ptane	Ingestion	heart gastrointestinal tract hematopoietic system liver nervous system eyes kidney and/or bladder	Not classified	Rat	NOAEL 331 mg/kg/day	90 days
Methyl acetate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	28 days
Methyl acetate	Inhalation	endocrine system hematopoietic system liver immune system kidney and/or bladder	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24	90 days

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Cyclohexane	Inhalation	auditory system	Not classified	Rat	mg/l 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 naphtha	Inhalation	nervous system	Not classified	Rat	LOAEL 4.6 mg/l	6 months
Petroleum naphtha	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.9 mg/l	13 weeks
Petroleum naphtha	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 0.6 mg/l	90 days
Petroleum naphtha	Inhalation	bone, teeth, nails, and/or hair blood liver muscles	Not classified	Rat	NOAEL 5.6 mg/l	12 weeks
Petroleum naphtha	Inhalation	heart	Not classified	Multiple animal species	NOAEL 1.3 mg/l	90 days
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

10 P 1 W 10 W 1 1 W 2 W 1							
Name	Value						
Pentane	Aspiration hazard						
Cyclohexane	Aspiration hazard						
Petroleum naphtha	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 Chronic Aquatic Toxicity: Category 3

No product test data available.

Material	CAS Number	Organism	Туре	Exposure	Test endpoint	Test result
Acetone	67-64-1	Algae other	Experimental	96 hours	EC50	11,493 mg/l
Acetone	67-64-1	Crustecea other	Experimental	24 hours	LC50	2,100 mg/l
Acetone	67-64-1	Rainbow trout	Experimental	96 hours	LC50	5,540 mg/l
Acetone	67-64-1	Water flea	Experimental	21 days	NOEC	1,000 mg/l
Acetone	67-64-1	Bacteria	Experimental	16 hours	NOEC	1,700 mg/l
Acetone	67-64-1	Redworm	Experimental	48 hours	LC50	>100
Dimethyl Ether	115-10-6	Bacteria	Experimental		EC10	>1,600 mg/l
Dimethyl Ether	115-10-6	Guppy	Experimental	96 hours	LC50	>4,100 mg/l
Dimethyl Ether	115-10-6	Water flea	Experimental	48 hours	EC50	>4,400 mg/l
Isobutane	75-28-5		Data not available or insufficient for classification			N/A
2,6,6- Trimethylbicyc lo[3.1.1]hept-2- ene, polymer with 6,6- dimethyl-2- methylenebicyc lo[3.1.1]heptan e		Activated sludge	Experimental	3 hours	NOEC	1,000 mg/l
2,6,6- Trimethylbicyc lo[3.1.1]hept-2- ene, polymer with 6,6- dimethyl-2- methylenebicyc lo[3.1.1]heptan e	31393-98-3	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
2,6,6- Trimethylbicyc lo[3.1.1]hept-2-	31393-98-3	Water flea	Endpoint not reached	21 days	EL10	>100 mg/l

	1	1	1	ī	1	1
ene, polymer						
with 6,6-						
dimethyl-2-						
methylenebicyc						
lo[3.1.1]heptan						
e Non-hazardous	Trade Secret		Data not			N/A
components	Trade Secret		available or			IN/A
components			insufficient for			
			classification			
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
Methyl acetate	79-20-9	Bacteria	Experimental	16 hours	EC50	6,000 mg/l
Methyl acetate	79-20-9	Green algae	Experimental	72 hours	EC50	>120 mg/l
Methyl acetate	79-20-9	Water flea	Experimental	48 hours	EC50	1,026.7 mg/l
Methyl acetate	79-20-9	Green algae	Experimental	72 hours	NOEC	120 mg/l
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
Petroleum	64742-48-9	Fathead	Estimated	96 hours	LL50	8.2 mg/l
naphtha		minnow				
Petroleum	64742-48-9	Green Algae	Estimated	72 hours	EL50	3.1 mg/l
naphtha						
Petroleum	64742-48-9	Water flea	Estimated	48 hours	EL50	4.5 mg/l
naphtha						
Petroleum	64742-48-9	Green Algae	Estimated	72 hours	NOEL	0.5 mg/l
naphtha						
Petroleum	64742-48-9	Water flea	Estimated	21 days	NOEL	2.6 mg/l
naphtha	1.00.00.0		-	0.61	7.050	
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		
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Acetone	67-64-1	Experimental Photolysis		Photolytic half- life (in air)	147 days (t 1/2)	
Acetone	67-64-1	Experimental Biodegradation	28 days	BOD	78 % BOD/ThBOD	OECD 301D - Closed bottle test
Dimethyl Ether		Experimental Photolysis		Photolytic half- life (in air)	12.4 days (t 1/2)	Non-standard method
Dimethyl Ether		Experimental Biodegradation	28 days	BOD	5 % weight	OECD 301D - Closed bottle test
Isobutane	75-28-5	Experimental Photolysis		Photolytic half- life (in air)	1/2)	Non-standard method
2,6,6- Trimethylbicyc lo[3.1.1]hept-2- ene, polymer with 6,6- dimethyl-2- methylenebicyc lo[3.1.1]heptan e	31393-98-3	Experimental Biodegradation	28 days	BOD	4 % BOD/ThBOD	OECD 301D - Closed bottle test
Non-hazardous components	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
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
Methyl acetate	79-20-9	Experimental Biodegradation	28 days	BOD	70 % weight	OECD 301D - Closed bottle test
Cyclohexane	110-82-7	Experimental Photolysis		Photolytic half- life (in air)	1/2)	Non-standard method
Cyclohexane	110-82-7	Experimental Biodegradation	28 days	BOD	77 % BOD/ThBOD	OECD 301F - Manometric respirometry
Petroleum naphtha	64742-48-9	Estimated Biodegradation	28 days	BOD	10 % BOD/ThBOD	OECD 301D - Closed bottle test
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
Acetone	67-64-1	Experimental		Bioaccumulatio	0.65	
		BCF - Other		n factor		
Acetone	67-64-1	Experimental		Log Kow	-0.24	
		Bioconcentrati				
		on				
Dimethyl Ether	115-10-6	Data not	N/A	N/A	N/A	N/A
		available or				
		insufficient for				
		classification				
Isobutane	75-28-5	Experimental		Log Kow	2.76	Non-standard method

		Bioconcentrati on				
2,6,6- Trimethylbicyc lo[3.1.1]hept-2- ene, polymer with 6,6- dimethyl-2- methylenebicyc lo[3.1.1]heptan e		Experimental Bioconcentrati on		Log Kow	7.41	Non-standard method
Non-hazardous components	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Pentane	109-66-0	Estimated Bioconcentrati on		Bioaccumulatio n factor	26	Estimated: Bioconcentration factor
Methyl acetate	79-20-9	Experimental Bioconcentrati on		Log Kow	0.18	Non-standard method
Cyclohexane	110-82-7	Experimental BCF - Carp	56 days	Bioaccumulatio n factor	129	OECD 305E - Bioaccumulation flow- through fish test
Petroleum naphtha	64742-48-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulatio n factor	90	
Toluene	108-88-3	Experimental Bioconcentrati on		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. Facility must be capable of handling aerosol cans. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

Disposal of the aerosol dispenser (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.: UN1950

Proper Shipping Name: AEROSOLS

Class/Division: 2.1 Sub Risk: Not applicable. Packing Group: Not applicable.

Special Instructions: Limited quantity may apply

Hazchem Code: 2YE

IERG: 49

International Air Transport Association (IATA) - Air Transport

UN No.: UN1950

Proper Shipping Name: AEROSOLS, FLAMMABLE

Class/Division: 2.1
Sub Risk: Not applicable.
Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: UN1950

Proper Shipping Name: AEROSOLS

Class/Division: 2.1
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

Special Instructions: Limited quantity may apply

SECTION 15: Regulatory information

HSNO Approval number HSR002515

Group standard name Aerosols (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 3,000 L (aggregate water capacity)
Hazardous atmosphere zone 3,000 L (aggregate water capacity)

Fire extinguishers One required for 3,000 L (aggregate water capacity)

Emergency response plan 3,000 L (aggregate water capacity)

Secondary containment Not required Tracking Not required

Warning signage 3,000 L (aggregate water capacity)

SECTION 16: Other information

Revision information:

Complete document review.

Document group:	16-5619-8	Version number:	5.00
Issue Date:	13/03/2022	Supersedes date:	05/05/2021

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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