

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1. Product identifier

Product name : AVERY DENNISON ADHESIVE REMOVER AUSTRALIA
 Product code : CA6970001 AUS

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

Application : SU22 Professional use. For industrial or institutional use. PC35 Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier : Avery Dennison Materials Pty Ltd
 1124 Centre Road
 3167 Oakleigh South, VIC, Australia
 Telephone : +613 9271 0300
 Fax : +613 9271 0301
 E-mail : peter.kuivenhoven@eu.averydennison.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:

AU - Telephone : 000 (24/7)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):

The Poison Center 13 11 26 (24/7)

SECTION 2 HAZARDS IDENTIFICATION

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2.1. Classification of the substance or mixture

Classification (99/45/EC) : Harmful. Sensitizing. Irritant. Flammable. Dangerous for the environment.
 CLP classification (1272/2008/EC) : Flammable liquid, hazard category 3. Skin irritation, category 2. Eye irritation, category 2. Skin sensitization, category 1. Specific target organ toxicity after single exposure, category 3. Hazardous to the aquatic environment — Acute category 1. Hazardous to the aquatic environment — Chronic category 1.
 Human health hazards : Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Harmful: may cause lung damage if swallowed.
 Physical/chemical hazards : Flammable.
 Environmental hazards : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 Other information : Keep out of the reach of children. Avoid contact with skin. Wear suitable gloves. Do not breathe spray. Use only in well-ventilated areas.

2.2. Label elements

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Warning

H- and P-phrases : H226 Flammable liquid and vapour.

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370+P378	In case of fire: Use carbondioxide (CO ₂), alcohol resistant foam, dry chemical or water fog to extinguish.
P261	Avoid breathing spray.
P280	Wear protective gloves/eye protection/face protection.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to an official chemical waste depot.

Additional labelling (99/45/EC and/or 1272/2008/EC)

- : Where the mixture is labelled in accordance with Regulation (EC) No 1272/2008 (CLP) the packaging shall (also) carry the text: Contains: d-Limonene > 60 pct. 1-Methoxypropan-2-ol 10 - < 30 pct Propan-2-ol 10 - < 30 pct.
- : 5 % of the mixture consists of ingredient(s) of unknown toxicity.

Specific labelling for Australia

- : UN 1993 Flammable liquid N.O.S. (propane-2-ol, d-limonene). Refer to the Safety Data Sheet before use.

2.3. Other hazards

Other information : None known.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

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3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Symbols	R-phrases
d-Limonene	50 - 75	5989-27-5	227-813-5	Xi; N	10-38-43-50/53
1-Methoxypropan-2-ol	10 - < 15	107-98-2	203-539-1	-----	10-67
Propan-2-ol	10 - < 15	67-63-0	200-661-7	F; Xi	11-36-67
2-Butoxyethanol	1 - < 5	111-76-2	203-905-0	Xn	20/21/22-36/38
7-Methyl-3-methylenoocta-1,6-diene	1 - < 5	123-35-3	204-622-5	Xn	10-38-65
Pin-2(3)-ene	0,1 - < 1	80-56-8	201-291-9	Xn	10-38-43-65

Reference is made to chapter 16 for full text of each relevant R phrase. Occupational exposure limit(s), if relevant, are listed in section 8.

Substance name	REACH nr.	Hazard Class	Pictograms	H-phrases
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d-Limonene	01-2119529223-47	Flam. Liq. 3; Skin Irrit. 2; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1	GHS02; GHS07; GHS09	H226; H315; H317; H410
1-Methoxypropan-2-ol	01-2119457435-35	Flam. Liq. 3; STOT SE 3	GHS02; GHS07	H226; H336
Propan-2-ol	01-2119457558-25	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3	GHS02; GHS07	H225; H319; H336
2-Butoxyethanol	01-2119475108-36	Acute Tox. 4; Eye Irrit. 2; Skin Irrit. 2	GHS07	H332; H312; H302; H319; H315
7-Methyl-3-methyleneocta-1,6-diene	01-2119514321-56	Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2; Asp. Tox. 1	GHS02; GHS07; GHS08	H226; H315; H319; H304
Pin-2(3)-ene	01-2119519223-49	Flam. Liq. 3; Skin Sens. 1; Asp. Tox. 1; Skin irrit 2	GHS07; GHS08; GHS02	H226; H317; H315; H304

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES

4.1. Description of first aid measures

First aid measures

- Inhalation : Move victim into fresh air. Consult a doctor if victim feels unwell.
- Skin contact : Take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up. Consult a doctor if irritation occurs.
- Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Consult a doctor if irritation persists.
- Ingestion : Do not induce vomiting. Do rinse the mouth. Give one glass of water. As necessary give 1 or 2 soupspoons of laxative (sodium sulphate). Never give anything by mouth to an unconscious person. Consult a doctor immediately if victim feels unwell.

4.2. Most important symptoms and effects, both acute and delayed

Effects and symptoms

- Inhalation : May cause headache, drowsiness, dizziness and a feeling of sickness. May cause irritation to respiratory airways and coughing.
- Skin contact : Irritant. May cause redness and irritation, sensitisation. May produce an allergic reaction. May cause dry skin and redness.
- Eye contact : Irritant. May cause redness and pain.
- Ingestion : May cause a feeling of sickness, vomiting and diarrhoea. May cause lung damage, sore throat and lack of breath.

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

- Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

- Suitable : Carbondioxide (CO2). Alcohol resistant foam. Dry chemical. Water fog.
- Not suitable : Water jet.

5.2. Special hazards arising from the substance or mixture

- Special exposure hazards : Will float on water and can be reignited. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
- Hazardous thermal decomposition products : Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

- Special protective equipment for fire-fighters : Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

- Personal precautions : Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Keep away from sources of ignition — No smoking. Vapours are heavier than air. Build up (of gasses) in low areas involves risk of suffocation.

6.2. Environmental precautions

- Environmental precautions : Avoid release of product into sewers, surface water and/or ground water. Large spills: contain with dike. Waste product should not be allowed to contaminate soil or water.
- Other information : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spilled material in containers. Absorb residues in sand or other inert material. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

- Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

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7.1. Precautions for safe handling

- Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Do not breathe spray. Do not breathe vapour. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

- Storage : Keep in a cool, dry and well-ventilated place (< 35 °C). Keep away from oxidizing agents. Protect from sunlight.
- Recommended packaging : Keep only in the original container.
- Non recommended packaging : Steel (except stainless steel). PE and PP.

7.3. Specific end use(s)

- Use : Use only as directed. Do not mix with other products.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments
d-Limonene		110	-	MAC: DE, CH, NL
1-Methoxypropan-2-ol	GB	375	560	Skin
1-Methoxypropan-2-ol	EC	375	568	Skin
Propan-2-ol	GB	999	1250	-
2-Butoxyethanol	GB	123	246	Skin; BMGV
2-Butoxyethanol	EC	100	246	Skin
Pin-2(3)-ene		113		

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
d-Limonene	Inhalation				33,3 mg/m ³
1-Methoxypropan-2-ol	Dermal				50,6 mg/kg bw/day
	Inhalation	553,5 mg/m ³			369 mg/m ³
Propan-2-ol	Dermal				888 mg/kg bw/day
	Inhalation				500 mg/m ³
2-Butoxyethanol	Dermal		89 mg/kg bw		75 mg/kg bw/day
	Inhalation	246 mg/m ³	663 mg/m ³		98 mg/m ³
7-Methyl-3-methylenoocta-1,6-diene	Dermal		0,83 mg/kg bw		
	Inhalation				5,85 mg/m ³
Pin-2(3)-ene	Inhalation				5,98 mg/m ³

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
d-Limonene	Inhalation				8,33 mg/m ³
	Oral				4,76 mg/kg bw/day
1-Methoxypropan-2-ol	Dermal				18,1 mg/kg bw/day
	Inhalation				43,9 mg/m ³
	Oral				3,3 mg/kg bw/day
Propan-2-ol	Dermal				319 mg/kg bw/day
	Inhalation				89 mg/m ³
	Oral				26 mg/kg bw/day
2-Butoxyethanol	Dermal		44,5 mg/kg bw		38 mg/kg bw/day
	Inhalation	123 mg/m ³	426 mg/m ³		49 mg/m ³
	Oral		13,4 mg/kg bw		3,2 mg/kg bw/day
7-Methyl-3-methylenoocta-1,6-diene	Dermal				0,42 mg/kg bw/day
	Inhalation				1,25 mg/m ³
	Oral				0,42 mg/kg bw/day
Pin-2(3)-ene	Inhalation				1,06 mg/m ³
	Oral				0,31 mg/kg bw/day

Predicted no-effect concentration (PNEC):

Chemical name	Route of exposure	Fresh water	Marine water	
d-Limonene	Water	0,0054 mg/l	0,0005 mg/l	
	Sediment	1,32 mg/kg	0,13 mg/kg	
	STP			1,8 mg/l
	Soil			0,262 mg/kg
1-Methoxypropan-2-ol	Oral			3,33 mg/kg food
	Water	10 mg/l	1 mg/l	
	Sediment	52,3 mg/kg	5,2 mg/kg	
	Intermittent water			100 mg/l
Propan-2-ol	STP			100 mg/l
	Soil			5,49 mg/kg
	Water	140,9 mg/l	140,9 mg/l	
	Sediment	552 mg/kg	552 mg/kg	
2-Butoxyethanol	Intermittent water			140,9 mg/l
	STP			2251 mg/l
	Soil			28 mg/kg
	Oral			160 mg/kg food
7-Methyl-3-methyleneocta-1,6-diene	Water	8,8 mg/l	0,88 mg/l	
	Sediment	34,6 mg/kg	3,46 mg/kg	
	Intermittent water			9,1 mg/l
	STP			463 mg/l
Pin-2(3)-ene	Soil			3,13 mg/kg
	Oral			0,02 mg/kg food
	Water	0,008 mg/l	0,0008 mg/l	
	Sediment	5,022 mg/kg	0,502 mg/kg	
	STP			0,2 mg/l
	Soil			1,015 mg/kg
	Oral			2,78 mg/kg food
	Water	0,004 mg/l	0,0004 mg/l	
	Sediment	1,033 mg/kg	0,103 mg/kg	
	STP			3,26 mg/l
	Soil			0,539 mg/kg
	Oral			1,35 mg/kg food

8.2. Exposure controls

Engineering measures : Use only in well-ventilated areas. Comply with standard precautionary measures for working with chemicals.

Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.



- Body protection : Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367 resp. 345. Suitable material: nitril. Indication of permeation breakthrough time: not known.
- Respiratory protection : Take care of sufficient ventilation. Wear suitable respiratory protection in case of large scale exposure. Suitable: gas filter type AK (brown/green), class I or higher on e.g. a facemask in accordance with EN 140.
- Hand protection : Wear appropriate safety gloves in accordance with EN 374. Suitable material: nitril. ± 0,5 mm Indication of permeation breakthrough time: not known.

Eye protection : Wear appropriate safety glasses with side shields, in accordance with EN 166, when there is danger of possible eye contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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9.1. Information on basic physical and chemical properties

Appearance	: Liquid.	
Colour	: Colourless.	
Odour	: Characteristic.	
Odour threshold	: Not known.	
pH	: Not applicable.	Almost waterfree product.
Solubility in water	: Soluble.	
Partition coefficient (n-octanol/water)	: Not known.	
Flash point	: 24 °C	PMcc
Flammability (solid, gas)	: Not applicable.	Liquid. See flashpoint.
Auto ignition temperature	: > 230 °C	
Boiling point/boiling range	: 82 °C	
Melting point/melting range	: < 0 °C	
Explosive properties	: None known.	Does not contain explosives.
Explosion limits (in air)	: Not known.	Lower explosion limit in air (%): 0,9 (d-Limonene)
	:	Upper explosion limit in air (%): 12 Propan-2-ol
Oxidising properties	: Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	: Not applicable.	
Viscosity (20°C)	: Not known.	
Viscosity (40°C)	: Not relevant.	The product contains < 10% substances having an aspiration hazard.
Vapour pressure (20°C)	: > 2300 Pa	
Vapour density (20°C)	: > 1	(air = 1)
Relative density (20°C)	: 0,8 g/ml	
Evaporation rate	: < 1	(n-butyl acetate = 1)

SECTION 10 STABILITY AND REACTIVITY
10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : No other hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition : Not known.
products

SECTION 11 TOXICOLOGICAL INFORMATION

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11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

- Acute toxicity : Calculated LC50: > 10 mg/l. Ingredients of unknown toxicity: 68 %. ATE: > 5 mg/l. May cause damage to organs. Target organ(s): Central nervous system. Effect(s): Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, lightheadedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.
- Corrosion/irritation : May cause irritation to respiratory airways and coughing. Not classified - based on available data, the classification criteria are not met.
- Sensitisation : Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Skin contact

- Acute toxicity : Calculated LD50: > 2156 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
- Corrosion/irritation : Irritant. May cause redness. Prolonged contact may dry out and defat the skin.
- Sensitisation : May cause sensitisation by skin contact. May produce an allergic reaction.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Eye contact

- Corrosion/irritation : Irritant.

Ingestion

- Acute toxicity : Calculated LD50: > 4228 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause lung damage, sore throat and lack of breath. May cause bronchopneumonia.
- Corrosion/irritation : May cause a feeling of sickness, stomachache, vomiting and diarrhoea. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Does not contain carcinogenic substances. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal
d-Limonene	Genotoxicity - in vitro	Not genotoxic		
	LD50 (oral)	4400 mg/kg bw	-----	Rat
	LD50 (dermal)	> 2000 mg/kg bw	-----	Rabbit
	NOEL (oral)	5 mg/kg bw/d	-----	Rat
	NOAEL (oral)	30 mg/kg bw/d		Rat
	Skin irritation	Irritant	-----	-----
	NOAEL (development, oral)	600 mg/kg bw/d		Rat
	Skin sensitisation	10075 ug/cm2	OECD 429	Mouse
	Mutagenicity	Negative	OECD 471	

1-Methoxypropan-2-ol	Eye irritation	Non-irritant	OECD 405	Rabbit
	NOEL (carcinogenicity, oral)	> 300 mg/kg bw/d	OECD 451	Rat
	Genotoxicity - in vivo	> 2000 mg/kg bw/d		Rat
	LC50 (inhalation)	> 26315 mg/m3	OECD 403	Rat
	Eye irritation	Mildly irritant	OECD 405	Rabbit
	NOAEL (oral)	919 mg/kg bw/d	OECD 407	Rat
	NOEL (inhalation)	300 mg/m3	OECD 453	Rat
	NOAEL (dermal)	> 1000 mg/kg bw/d	OECD 410	Rabbit
	LD50 (oral)	3739 mg/kg bw	OECD 401	Rat
	Skin irritation	Non-irritant	OECD 404	Rabbit
	Genotoxicity - in vitro	Not genotoxic	OECD 473	
	NOEL (carcinogenicity, inh.)	11278 mg/m3	OECD 453	Rat
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Skin sensitisation	Not sensitizing	-----	Guinea pig
	LD50 (dermal)	> 2000 mg/kg bw	OECD 402	Rat
	NOAEL (fertility, inh.)	1128 mg/m3	OECD 416	Rat
	NOAEL (developmental toxicity, inh.)	> 11278 mg/m3	OECD 414	Rat
Propan-2-ol	NOAEL (oral)	870 mg/kg bw/d	-----	Rat
	LD50 (oral)	4396 mg/kg bw	-----	Rat
	LD50 (dermal)	12800 mg/kg bw	-----	Rat
	LC50 (inhalation)	46600 mg/m3	-----	Rat
	Skin irritation	Slightly irritant	OECD 404	Rabbit
	Eye irritation	Irritant	OECD 405	Rabbit
	NOAEL (fertility, oral)	407 mg/kg bw/d		Rat
	NOAEL (development, oral)	400 mg/kg bw/d		Rat
	NOEL (carcinogenicity, oral)	Not carcinogenic	OECD 416	Rat
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	Mutagenicity	Negative	OECD 471	
	NOAEL (inhalation)	12500 mg/m3	OECD 451	Rat
	Genotoxicity - in vivo	Not genotoxic	OECD 474	Mouse
	NOEL (carcinogenicity, inh.)	12500 mg/m3		Mouse
2-Butoxyethanol	Genotoxicity - in vitro	Not genotoxic	OECD 476	
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	NOAEL (oral)	< 69	OECD 408	Rat
	Skin irritation	Irritant	OECD 404	Rabbit
	NOAEL (development, oral)	> 100 mg/kg bw/d	OECD 414	Rat
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vivo	Not genotoxic	OECD 474	Mouse
	NOAEL (dermal)	> 150 mg/kg bw/d	OECD 411	Rabbit
	LD50 (oral)	1746 mg/kg bw	OECD 401	Rat
	NOEL (carcinogenicity, oral)	Not carcinogenic		
	Genotoxicity - in vitro	Not genotoxic		
	NOAEL (fertility, oral)	720 mg/kg bw/d		
	NOAEL (inhalation)	152 mg/m3	OECD 413	Rat
	LD50 (dermal)	435 mg/kg bw	OECD 402	Rabbit
	LC50 (inhalation)	2200 mg/m3	OECD 403	Rat
	Eye irritation	Irritant	OECD 405	Rabbit

7-Methyl-3-methyleneocta-1,6-diene	Skin irritation	Irritant	-----	-----
	Eye irritation	Irritant	-----	-----
	NOAEL (development, oral)	500 mg/kg bw/d	OECD 414	Rat
	Skin sensitisation	Not sensitizing	OECD 429	Mouse
	NOAEL (oral)	500 mg/kg bw/d	-----	Rat
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	NOEL (carcinogenicity, oral)	500 mg/kg bw/d	OECD 451	Mouse
	Genotoxicity - in vitro	Not genotoxic	OECD 473	
	Genotoxicity - in vivo	Negative	OECD 474	Mouse
	NOAEL (fertility, oral)	500 mg/kg bw/d	OECD 415	Rat
	LD50 (oral)	> 11900 mg/kg bw	-----	Rat
	LD50 (dermal)	> 5000 mg/kg bw		Rabbit
	NOAEL (oral) - estimate	250 mg/kg bw/d	Read across	
	NOAEL (inhalation)	170 mg/m3	OECD 413	Rat
Pin-2(3)-ene	LD50 (oral)	3700 mg/kg bw	-----	Rat
	NOAEL (development) - estimate	250 mg/kg.d	Read across	Rat
	Genotoxicity - estimate	Not genotoxic	Read across	
	Eye irritation - estimate	Moderately irritant	Read across	Rabbit
	Mutagenicity	Not mutagenic	-----	Salmonella typhimurium
	LD50 (dermal)	> 5000 mg/kg bw	-----	Rabbit
	Skin sensitisation	Sensitizing.	-----	Guinea pig
	Skin irritation	Moderately irritant	-----	Rabbit
	Skin irritation	Non-irritant	-----	Human

SECTION 12 ECOLOGICAL INFORMATION

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12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Very toxic to aquatic organisms. Calculated LC50 (fish): 1 mg/l. Calculated EC50 (waterflea): < 1 mg/l. Contains 0 % of components with unknown hazards to the aquatic environment. May form an oil film on the water surface causing a decline in oxygen content with possible adverse effects for aquatic organisms.

12.2. Persistence and degradability

Persistence – degradability : May cause long-term adverse effects in the aquatic environment.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB ass

PBT/vPvB assessment : Does not contain PBT or vPvB substances.

12.6. Other adverse effects

Other information : Not applicable.

Ecological information:

Chemical name	Property		Method	Test animal
d-Limonene	NOEC (waterflea) - chronic	0,15 mg/l.d		Daphnia magna
	Ultimate aerobic biodegradation (%)	> 92 %		
	EC50 (waterflea)	0,36 mg/l	OECD 202	Daphnia magna
	LC50 (fish)	0,720 mg/l	OECD 203	Pimephales promelas
	Log P(ow)	4,38		

SECTION 13 DISPOSAL CONSIDERATIONS
13.1. Waste treatment methods

- Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.
- Additional warning : Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.
- European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.
- Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION
14.1. UN number

UN nr. : UN 1993

14.2. UN proper shipping name

Transport name : FLAMMABLE LIQUID, N.O.S. (d-Limonene ; Propan-2-ol)

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID (road / railway)

Class : 3
 Classification code : F1
 Packaging group : III
 Danger label : 3 + N



IMDG (sea)

Class : 3
 Packaging group : III
 EmS (fire / spill) : F - E / S - E

Marine pollutant : Yes


 IATA (air)
Class : 3

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments.

SECTION 15 REGULATORY INFORMATION

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

Community regulations : Regulation (EC) No 1907/2006 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

Ingredient declaration according to Regulation 648/2004:

Contains:	Concentration (%)
Aliphatic hydrocarbons	> 30
d-Limonene	

15.2. Chemical safety assessment

 Chemical safety
assessment : Not applicable.

SECTION 16 OTHER INFORMATION

*

16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EC) 1907/2006 dated 18 December 2006 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

Full text of R-phrases mentioned in section 3:

R10	Flammable.
R11	Highly flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36	Irritating to eyes.
R36/38	Irritating to eyes and skin.

R38	Irritating to skin.
R43	May cause sensitisation by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Full text of H-phrases mentioned in section 3:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
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.
H410	Very toxic to aquatic life with long lasting effects.

Number format : ", " used as decimal separator.

History

Date of first issue : 24-04-2007
Date of second issue : 08-05-2007
Date of third issue : 27-11-2012
Date of fourth issue : 14-11-2013
Date of fifth issue : 07-09-2017

Herewith all previous issues are expired.