Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: **411 00 16480-4055**

Product name **REMOVE UNIVERSAL SEALANTS**

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

Intended use **Solvent-based aerosol for silicone removal**

1.3. Details of the supplier of the safety data sheet

Name **Meccanocar Italia S.r.l.**

Full address **Via San Francesco, 22**

District and Country **56033 Capannoli (PI)**
Italy

Tel. +39 0587 609433

Fax +39 0587 607145

e-mail address of the competent person

responsible for the Safety Data Sheet **moreno.meini@meccanocar.it**

1.4. Emergency telephone number

For urgent inquiries refer to **National Poisons Information Service: +44 121 507 4123**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurised container: may burst if heated.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.
P211	Do not spray on an open flame or other ignition source.
P201	Obtain special instructions before use.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.

Contains: 1,2-DICHLOROPROPANE
(R)-P-MENTHA-1,8-DIENE
HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC
HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	**x = Conc. %**	**Classification 1272/2008 (CLP)**
HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC		
CAS 64742-48-9	35 ≤ x < 37,5	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336, EUH066
EC 919-857-5		
INDEX -		
Reg. no. 01-2119463258-33-XXXX		
HYDROCARBONS C3-4		

CAS 68476-40-4 EC 270-681-9 INDEX - Reg. no. 01-2119486557-22-XXXX **(R)-P-MENTHA-1,8-DIENE**	24 ≤ x < 25,5	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: H K U
CAS 5989-27-5 EC 227-813-5 INDEX 601-029-00-7 Reg. no. 01-2119529223-47-XXXX **HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES** CAS 64742-49-0 EC 927-510-4 INDEX - Reg. no. 01-2119475515-33-XXXX	15 ≤ x < 16,5 15 ≤ x < 16,5	Flam. Liq. 3 H226, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 1 H410 M=1, Classification note according to Annex VI to the CLP Regulation: C Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411
1,2-DICHLOROPROPANE CAS 78-87-5 EC 201-152-2 INDEX 602-020-00-0 Reg. no. 01-2119557878-16-XXXX	7 ≤ x < 8	Flam. Liq. 2 H225, Carc. 1B H350, Acute Tox. 4 H302, Acute Tox. 4 H332

The full wording of hazard (H) phrases is given in section 16 of the sheet.

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 25,00 %

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.

6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
NOR	Norge	Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2019

HYDROCARBONS C3-4

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH			1000			

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Skin								23,4 mg/kg bw/d

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	1400				

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				149 mg/kg bw/d				
Inhalation				447 mg/m3				2085 mg/m3
Skin				149 mg/kg bw/d				300 mg/kg bw/d

(R)-P-MENTHA-1,8-DIENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	168	30			SKIN

TLV	NOR	140	25

Predicted no-effect concentration - PNEC		
Normal value in fresh water	1,4	mg/l
Normal value in marine water	1,4	mg/l
Normal value for fresh water sediment	3,85	mg/kg
Normal value for marine water sediment	0,385	mg/kg
Normal value of STP microorganisms	1,8	mg/l
Normal value for the food chain (secondary poisoning)	133	mg/kg
Normal value for the terrestrial compartment	0,763	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				4,8 mg/kg bw/d				
Inhalation				16,6 mg/m3				66,7 mg/m3
Skin				4,8 mg/kg bw/d				9,5 mg/kg bw/d

1,2-DICHLOROPROPANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	47	10			
VLEP	FRA	350	75			
TLV	NOR	185	40			
TLV-ACGIH		46	10			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,082	mg/l
Normal value in marine water	0,008	mg/l
Normal value for fresh water sediment	0,676	mg/kg
Normal value for marine water sediment	0,068	mg/kg
Normal value of STP microorganisms	0,59	mg/l
Normal value for the terrestrial compartment	0,088	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		2,29 mg/kg bw/d		0,52 mg/kg bw/d				
Inhalation	28,88 mg/m3	28,88 mg/m3		14,44 mg/m3	57,75 mg/m3	57,75 mg/m3		2,88 mg/m3
Skin	0,69 mg/kg bw/d	1,03 mg/kg bw/d	0,67 mg/kg bw/d	0,52 mg/kg bw/d	1,39 mg/kg bw/d	2,07 mg/kg bw/d	1,39 mg/kg bw/d	1,03 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

The product must be used inside a closed circuit, in a well-ventilated environment and with strong localised aspiration systems in place.

HAND PROTECTION
None required.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Chemical resistant gloves are recommended. Nitrile, standards CEN EN 420 and EN 374 provide general requirements and lists of types of gloves.

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Chemical resistant gloves are recommended. If contact with forearms is likely, wear glove-style gloves. Nitrile, CEN EN 420 and EN 374 standards provide general requirements and lists of glove types.

(R)-P-MENTHA-1,8-DIENE

Chemical resistant protective gloves (standard EN 374-1).

1,2-DICHLOROPROPANE

Protective gloves, protective clothing, goggles, mask with approved filter.
Gloves materials and specifications:

- Viton gloves (thickness: 0.3-0.71 mm; typical breakthrough time: 480 min) or other fluoroelastomer gloves (thickness: 0.5-1.5 mm; typical breakthrough time:> 240 min);
- PVA gloves (thickness: 0.3 mm; typical breakthrough time: 360 min);
- neoprene gloves (thickness: 0.75 mm; typical breakthrough time: 60-120 min);
- nitrile gloves (thickness: 0.2-0.38 mm; typical breakthrough time: 10-30 min).

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid under pressure
Colour	transparent
Odour	typical
Odour threshold	Not available
pH	Not available
Melting point / freezing point	< -80 °C
Initial boiling point	> -42 °C
Boiling range	Not available
Flash point	< -100 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	1,8 % (V/V)
Upper explosive limit	9,5 % (V/V)
Vapour pressure	Not available
Vapour density	>2
Relative density	0,75 kg/l
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	400 °C
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

1,2-DICHLOROPROPANE

Decomposes on contact with: naked flames,overheated surfaces.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

1,2-DICHLOROPROPANE

Risk of explosion on contact with: aluminium,metal powders.May react dangerously with: alkaline metals,alkaline earth metals,sodium amides.Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating.

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Avoid heat, sparks, open flames and other sources of ignition.

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Avoid heat, sparks, open flames and other sources of ignition.

(R)-P-MENTHA-1,8-DIENE

Prolonged or excessive heat and / or exposure to air can cause non-hazardous decomposition and / or oxidation of the substance.
Keep away from heat and other causes of fire.

10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Strong oxidants

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Strong oxidants.

(R)-P-MENTHA-1,8-DIENE

Avoid contact with strong acids and strong oxidizing agents.

10.6. Hazardous decomposition products

1,2-DICHLOROPROPANE

May develop: hydrochloric acid.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
> 20 mg/l
LD50 (Oral) of the mixture:
>2000 mg/kg
LD50 (Dermal) of the mixture:
Not classified (no significant component)

1,2-DICHLOROPROPANE

LD50 (Oral) > 2200 mg/kg Rat

LD50 (Dermal) 10100 mg/kg Rabbit

LC50 (Inhalation) 9,4 mg/l/4h

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: OECD 423
Reliability: 2
Species: Rat (Wistar; male / female)
Route of exposure: Oral
Results: LD50> 15 000 mg / kg bw
Method: Equivalent or similar to OECD 403
Reliability: 1

Species: Rat (Crj: CD (SD); male / female)
Route of exposure: Inhalation (vapors)
Results: LC50> 4 951 mg / m³ air
Method: Equivalent or similar to OECD 402
Reliability: 2
Species: Rabbit (New Zealand White; male / female)
Route of exposure: Dermal
Results: LD50> 5 000 mg / kg bw

HYDROCARBONS C3-4

Method: Not indicated-Read Across
Reliability: 2
Species: Rat (Alderley Park (SPF); male / female)
Route of exposure: Inhalation
Results: LC50 1 443 mg / L air

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: standard acute oral test
Reliability: 2
Species: Rat (Charles River CD; male / female)
Route of exposure: Oral
Results: LD50> 8 mL / kg bw
Method: Equivalent or similar to OECD 403
Reliability: 2
Species: Rat (Wistar; male / female)
Route of exposure: Inhalation (vapors)
Results: LC50> 23.3 mg / L air
Method: The acute toxicity of SBP 100/140 was determined according to Noakes and Sanderson (1969): A method for determining the dermal toxicity of pesticides, Br. J. Industr Med 26: 59-64.
Reliability: 2
Species: Rat (Charles River CD; male / female)
Route of exposure: Dermal
Results: LD50> = 4 mL / kg bw

(R)-P-MENTHA-1,8-DIENE

Method: OECD 423
Reliability: 1
Species: Rat (Sprague-Dawley; female)
Route of exposure: Oral
Results: LD50> 2000 mg / kg bw

SKIN CORROSION / IRRITATION

Causes skin irritation

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD 404
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Irritating

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: Equivalent or similar to OECD 404
Reliability: 2
Species: Rabbit (New Zealand White)

Route of exposure: Dermal
Results: Category 2, Irritating

(R)-P-MENTHA-1,8-DIENE

Method: OECD 404
Reliability: 2
Species: Rabbit (albino)
Route of exposure: Dermal
Results: Not irritating

1,2-DICHLOROPROPANE

Method: OECD 404
Reliability: 1
Species: Rabbit
Route of exposure: Dermal
Results: Slightly irritating

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: OECD 405
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: Federal Register of the F.D.A. 28 (110), 6.6.1963, para. 191.12. Test for eye irritants
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

(R)-P-MENTHA-1,8-DIENE

Method: OECD 405
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Not irritating

1,2-DICHLOROPROPANE

Method: OECD GUIDELINES FOR TESTING OF CHEMICALS 438
Reliability: 1
Species: Chicken
Route of exposure: Ocular
Results: Slightly irritating

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: Equivalent or similar to OECD 406
Reliability: 2
Species: guinea pig (p-strain; male / female)
Route of exposure: Dermal
Results: Not sensitizing

(R)-P-MENTHA-1,8-DIENE

Method: OECD 429
Reliability: 2
Species: Mouse (CBA / Ca; female)
Route of exposure: Dermal
Results: Sensitizers

Respiratory sensitization
HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Skin sensitization
HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: OECD 406
Reliability: 2
Species: guinea pig (Hartley; female)
Route of exposure: Dermal
Results: Not sensitizing

1,2-DICHLOROPROPANE

Method: OECD 429
Reliability: 1
Species: Mouse (female)
Route of exposure: Dermal
Results: Not sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: OECD 471 in vitro test
Reliability: 1
Species: S. typhimurium
Results: Negative with or without metabolic activation
Method: Equivalent or similar to OECD 474 in vivo test
Reliability: 1
Species: Mouse (CD-1; male / female)
Route of exposure: Oral
Results: Negative

HYDROCARBONS C3-4

Method: OECD 474-test in vivo
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation (gas)
Results: Negative

Method: OECD 471 in vitro test - Read Across
Reliability: 1
Species: S. typhimurium
Results: Negative with and without metabolic activation

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: Equivalent or similar to OECD 471
Reliability: 1
Species: S. typhimurium, E. Coli
Results: Negative with or without metabolic activation
Bibliographic reference: Brooks, T.M. et al., The genetic toxicology of some hydrocarbon and oxygenated solvents (1988)

(R)-P-MENTHA-1,8-DIENE

Method: OECD 471 in vitro test
Reliability: 1
Species: S. typhimurium
Results: Negative with and without metabolic activation
Bibliographic reference:
Method: Comet assay (Tice et al., 2000) - in vivo test
Reliability: 2
Species: Rat (OFA Sprague-Dawley; male)
Route of exposure: Oral
Results: Negative

1,2-DICHLOROPROPANE

Method: OECD 471 in vitro test
Reliability: 1
Species: S. typhimurium
Results: Negative with or without metabolic activation
Method: EPA OPPTS 870.5395-in vivo test
Reliability: 1
Species: Mouse (CD-1; male)
Route of exposure: Oral
Results: Negative

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD 453
Reliability: 1
Species: Rat (F344 / N; male / female)
Route of exposure: Inhalation (vapors)
Results: NOAEC 138 mg / m^3 air

HYDROCARBONS C3-4

Method: Equivalent or similar to EPA OPP 83-5 -Read Across
Reliability: 1
Species: Rat (Fischer 344; male / female)
Route of exposure: Oral
Results: Carcinogen

(R)-P-MENTHA-1,8-DIENE

Method: Equivalent or similar to OECD 451
Reliability: 2
Species: Mouse (B6C3F1; male / female)
Route of exposure: Oral
Results: Negative

1,2-DICHLOROPROPANE

Method: Not indicated
Reliability: 1
Species: Rat (Fischer 344; male / female)
Route of exposure: Oral
Results: Negative
Bibliographic reference: OECD SIDS 1,2-DICHLOROPROPANE (2003)

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility
HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: OECD TG 413
Reliability: 1
Species: Rat (Fischer 344; male / female)
Route of exposure: Inhalation (vapors)
Results: NOAEC> = 400 ppm

HYDROCARBONS C3-4

Method: OECD 413
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation (gas)
Results: NOAEC (fertility) 10 000 ppm

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: Equivalent or similar to OECD 416
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Inhalation (vapors)
Results: NOAEL 9000 ppm

(R)-P-MENTHA-1,8-DIENE

Method: Equivalent or similar to OECD 408
Reliability: 2
Species: Mouse (B6C3F1; male / female)
Route of exposure: Oral
Results: Negative. NOAEL (fertility) = 500 mg / kg bw / day.

1,2-DICHLOROPROPANE

Method: EPA OTS 798.4700
Reliability: 1
Species: Rat (Sprague Dawley; male / female)
Route of exposure: Oral
Results: NOAEL 0.024 other:%

Adverse effects on development of the offspring
HYDROCARBONS C3-4

Method: EPA OPPTS 870.3700
Reliability: 1
Species: Rat (VAF / Plus®, Sprague-Dawley Derived (CD®) Crl: CD® IGS BR)
Route of exposure: Inhalation (gas)
Results: NOAEC (development) 10 426 ppm

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: Food and Drug Administration 1966 "Guidelines for Reproduction Studies for Safety Evaluation of Drugs for Human Use", Segment II
Reliability: 2
Species: Rat (CD (SD))
Route of exposure: Inhalation (vapors)
Results: NOAEC 1 200 ppm

1,2-DICHLOROPROPANE

Method: EPA OTS 798.4900
Reliability: 1
Species: Rat (Sprague Dawley)
Route of exposure: Oral
Results: NOAEL 30 mg / kg bw

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Based on available data and through expert judgment, the substance is classified in the target organ toxicity class for single exposure.

HYDROCARBONS C3-4

Based on available data and through expert judgment, the substance is not classified as dangerous in the target organ toxicity class for single exposure.

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Based on available data and through expert judgment, the substance is classified in the target organ toxicity class for single exposure.

(R)-P-MENTHA-1,8-DIENE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

1,2-DICHLOROPROPANE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

Target organ
HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Central nervous system

Route of exposure
HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Dermal and inhalation

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Inhalation

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C9-C11, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD 422
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: NOAEL> = 1000 mg / kg / day
Method: Equivalent or similar to OECD 413
Reliability: 1
Species: Rat (Albino; male / female)
Route of exposure: Inhalation (vapors)
Results: NOAEC 10186 mg / m3

HYDROCARBONS C3-4

Method: OECD 413
Reliability: 1
Species: Rat (Sprague-Dawley CD; male / female)
Route of exposure: Inhalation (gas)
Results: NOAEC 10 000 ppm

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES

Method: Not indicated
Reliability: 2
Species: Rat (Wistar; male)
Route of exposure: Inhalation (vapors)
Results: NOAEC 12 470 mg / m^3 air
Bibliographic reference: Takeuchi, Y. et al., A comparative study of the toxicity of n-pentane, n-hexane, and n-heptane to the peripheral nerve of the rat. (1981)

(R)-P-MENTHA-1,8-DIENE

Method: Equivalent or similar to OECD 409
Reliability: 2
Species: Dog (Beagle; male / female)
Route of exposure: Oral
Results: Negative. NOAEL = 100 mg / kg bw / day

1,2-DICHLOROPROPANE

Method: standard NTP methodology
Reliability: 1
Species: Rat (Fischer 344; male / female)
Route of exposure: Oral
Results: NOAEL 500 mg / kg bw / d.
Bibliographic reference:
Method: Not indicated
Reliability: 1
Species: Mouse (B6C3F1)

Route of exposure: Inhalation (vapors)
Results: NOAEL 15 ppm

ASPIRATION HAZARD

Excluded because the aerosol does not allow the accumulation of a significant amount of product in the mouth

SECTION 12. Ecological information

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment.

12.1. Toxicity

(R)-P-MENTHA-1,8-DIENE	
LC50 - for Fish	35 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	69,6 mg/l/48h Daphnia pulex
HYDROCARBONS C3-4	
LC50 - for Fish	49,47 mg/l/96h
HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES	
LC50 - for Fish	13,4 mg/l/96h

12.2. Persistence and degradability

HYDROCARBONS C3-4
Easily degradable in water.
HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES
Quickly degradable in water, 98% in 28 days.
(R)-P-MENTHA-1,8-DIENE
Rapidly degradable in water, 71.4% in 28 days.

(R)-P-MENTHA-1,8-DIENE	
Solubility in water	0,1 - 100 mg/l
Rapidly degradable	
1,2-DICHLOROPROPANE	
Solubility in water	1000 - 10000 mg/l
NOT rapidly degradable	

12.3. Bioaccumulative potential

(R)-P-MENTHA-1,8-DIENE	
Partition coefficient: n-octanol/water	4,38
BCF	1022
1,2-DICHLOROPROPANE	
Partition coefficient: n-octanol/water	1,99

12.4. Mobility in soil

1,2-DICHLOROPROPANE

Partition coefficient: soil/water	1,72

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

HYDROCARBONS, C7, N-ALCANS, ISOALKANS, CYCLES
The product is suitable for combustion in a closed controlled burner for the value or disposal of the fuel by supervised incineration at very high temperatures to prevent the formation of undesirable combustion products.

(R)-P-MENTHA-1,8-DIENE
After a preliminary treatment, the product can be disposed of in a special waste incinerator in accordance with the rules relating to the disposal of special waste. Disposal must be carried out in accordance with local and national regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA:	1950

14.2. UN proper shipping name

ADR / RID:	AEROSOLS
IMDG:	AEROSOLS
IATA:	AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR / RID:	Class: 2	Label: 2.1

IMDG:	Class: 2	Label: 2.1
IATA:	Class: 2	Label: 2.1

14.4. Packing group

ADR / RID, IMDG, IATA: -

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 L	Tunnel restriction code: (D)
	Special Provision: -		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 150 Kg	Packaging instructions: 203
	Pass.:	Maximum quantity: 75 Kg	Packaging instructions: 203
	Special Instructions:	A145, A167, A802	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P3a-E2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point	40

Contained substance

Point	28	1,2-DICHLOROPROPAN

E Reg. no.: 01-
2119557878-16-
XXXX

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Gas 1A	Flammable gas, category 1A
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Press. Gas (Liq.)	Liquefied gas
Carc. 1B	Carcinogenicity, category 1B
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1

Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may burst if heated.
H350	May cause cancer.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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14. Regulation (EU) 2018/669 (XI Atp. CLP)
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16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
Product`s classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.
The data for evaluation of chemical-physical properties are reported in section 9.