

Safety data sheet

According to reg. (UE) 2015/830

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

1.1. Product identifier

Code: 0030450
 Product name: AGRUMOIL
 Chemical name and synonym: AGRUMOIL

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

Sector of use: SU22 – Professional uses SU21 – Consumer uses
 Intended use: Solvent/diluent and degreaser cleaner for wooden surfaces

1.3. Details of the supplier of the safety data sheet

Name: MARBEC S.R.L.
 Full address: VIA CROCE ROSSA 5/i
 District and Country: 51037 MONTALE (PISTOIA)
 ITALY

Tel. +39 0573/959848

Fax +39 0573/959385

e-mail address of the competent person
 responsible for the Safety Data Sheet

info@marbec.it

1.4. Emergency telephone number

For urgent inquiries refer to

MARBEC srl
 +39 0573959848 h8.30-13 h14-18 or +39 3348578502
 Telephone number of Poison Centers open 24/24 h
 CAV IRCSS Fondazione Maugeri – Pavia 0039-0382-24444
 CAV Ospedali Riuniti – Bergamo 0039-800-883300
 CAV Ospedale Niguarda Ca` Granda – Milano 0039-02-66101029
 CAV Ospedale Careggi- Firenze 0039-055-7947819
 CAV Policlinico Gemelli – Roma 0039-06-3054343
 CAV Policlinico Umberto I – Roma 0039-06 49978000
 CAV Ospedale Cardarelli – Napoli 0039-081 5453333

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 EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

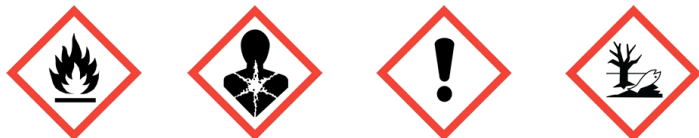
Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
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:

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long-lasting effects
EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fumes/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P331 Do NOT induce vomiting.
P391 Collect spillage.

Contains: Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
d-Limonene

Product not intended for uses envisaged by Dir. 2004/42 / EC.

2.3. Other hazards.

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

The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%.

SECTION 3. Composition/information on ingredients.**3.2. Mixtures.**

Contains:

Identification.	x= Conc. %.	Classification 1272/2008 (CLP).
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics		
CAS. -	50 \leq x < 100	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336,

EUH066

Asp. Tox. 1 H304: $\geq 1\%$

EC. 919-857-5

INDEX. -

Reg. no. 01-2119463258-33

d-Limonene

CAS. 5989-27-5

 $3 \leq x < 9$ Flam. Liq. 3 H226, Asp. Tox.
1 H304, Skin Irrit. 2 H315,
Skin Sens. 1 H317, Aquatic
Chronic 1 H410 M=1

EC. 227-813-5

INDEX. 601-029-00-7

Reg. no. 01-2119529223-47

bis (2-ethylhexyl) adipate $1 \leq x < 3$

CAS 103-23-1

EC 203-090-1

INDEX -

Reg. n. 01-2119439699-19-xxxx

2-ethylanthraquinone $x < 0,005$ Flam. Liq. 3 H226, Asp. Tox.
1 H304, STOT SE 3 H336,
EUH066

CAS 84-51-5

EC 201-535-4

INDEX -

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

NOTE: The white spirit present in this product is a UVCB complex (PrC3), CAS n.a., EC 919-857-5, n. INDEX: n.a. ("Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics" complex and variable combination of paraffinic, cyclic and aromatic hydrocarbons having carbon numbers predominantly in the interval C9-C11 and boiling point in the interval 130°C - 210°C).

Some suppliers give these related CAS: 64742-48-9.

Applicable Note P of Attached 1. Concentration of benzene < 0,1 in weight.

SECTION 4. First aid measures.

4.1. Description of first aid measures.

EYES: rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present and it is easy to do. Continue rinsing. Immediately call a doctor.

SKIN: Wash thoroughly and immediately with soap and water. Take off contaminated clothing. In case of irritation, swelling or redness, consult a medical specialist. Wash contaminated clothing before reuse. For thermal burns, cool the injured party. Hold the burnt area under cold running water for at least five minutes or until the pain subsides. Avoid a general hypothermia. During the use of high-pressure equipment, an injection of product can occur even without apparent external injury. In this case immediately transfer the injured to hospital. Do not wait the onset of symptoms.

INHALATION: In case of difficult breathing move the injured person to fresh air and keep in a comfortable position for breathing. If the victim is unconscious and does not breath, check the absence of obstacles to breath and give artificial respiration by trained staff. If necessary, do external cardiac massage and consult a doctor. If the victim breaths, keep him in the lateral safety position. Give oxygen if necessary.

INGESTION: do not induce vomiting to avoid the risk of aspiration. Immediately take the injured to hospital. Do not wait the onset of symptoms. If vomiting occurs spontaneously, keep head down to avoid the risk of aspiration of vomit into the lungs.

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

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Contact with eyes may cause irritation.

Contact with the skin: redness. Repeated exposure may cause skin dryness or cracking.

Inhalation: headache, dizziness, somnolence, nausea and other effects on the central nervous system.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause depression in the central nervous system. If swallowed, the material can be aspirated into the lungs and cause chemical pneumonitis.

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

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

If accidentally ingested, the product may enter the lungs due to its low viscosity and cause the rapid development of severe lung lesions (keep under medical supervision for 48 hours).

Notes to the doctor: Treat symptomatically

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. 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. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

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.

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any

contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Keep unequipped people away. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) or heat from the area where the leak occurred.

6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

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.

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

Use appropriate personal protective equipment if necessary. Avoid contact with skin and eyes. Do not swallow. Avoid breathing vapors. Do not release into the environment. Make sure that appropriate cleaning measures are taken (housekeeping). Contaminated material must not accumulate in the workplace and must never be stored in a pocket. Keep away from food and drink. Do not eat, drink or smoke while using the product. Wash hands thoroughly after handling. Do not reuse contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Keep away from strong oxidants and reducing agents.

Keep away from food, drink and feed.

The structure of the storage area, the characteristics of the tanks, the equipment and the operating procedures must comply with the relevant legislation at European, national or local level. Storage installations must be equipped with appropriate systems to prevent soil and water contamination in the event of leaks or spills. The cleaning, inspection and maintenance of the internal structure of the storage tanks must be carried out by qualified and properly equipped personnel, as established by national legislation, local or company regulations. Before accessing the storage tanks and starting any type of intervention of cleaning-up in a confined space, carry out an adequate cleaning up, control the atmosphere and check the oxygen content and the degree of flammability.

Store separate from oxidizing agents.

Suitable materials: use mild steel or stainless steel for containers and coatings. For the realization of containers or internal coverings, use approved and suitable material for the use of the product. Some synthetic materials may not be suitable for containers or coatings based on the characteristics of the material and intended uses. Check the compatibility of the materials with the manufacturer in relation to the conditions of use. If the product is supplied in containers, store it in the original container or in a container suitable for the type of product. Keep containers tightly closed and properly labeled. Empty containers may contain flammable product residues, which may result in a risk of fire or explosion. Open slowly to check for pressure releases. Do not weld, braze, drill, cut or incinerate empty containers unless they have been properly cleaned up.

Storage class TRGS 510 (Germany):

3

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.**8.1. Control parameters.**

Regulatory References:

RCP TLV
ACGIH TLVs and BEIs –
Appendix H

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
RCP TLV		1200	197		

Predicted no-effect concentration - PNEC

Normal value in fresh water	NPI
Normal value in marine water	NPI
Normal value for fresh water sediment	NPI
Normal value for marine water sediment	NPI
Normal value for water, intermittent release	NPI
Normal value of STP microorganisms	NPI
Normal value for the food chain (secondary poisoning)	NPI
Normal value for the terrestrial compartment	NPI
Normal value for the atmosphere	NPI

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Systemic acute	Chronic local	Chronic systemic
Oral				125 mg/kg bw/d				
Inhalation				185 mg/m3 24h				871 mg/m3 8h
Skin				125 mg/kg bw/d				208 mg/kg bw/d

d-Limonene**Predicted no-effect concentration - PNEC**

Normal value in fresh water	5,4	mg/l
Normal value in marine water	0,54	mg/l
Normal value for fresh water sediment	1,32	mg/kg

Normal value for marine water sediment	0,13	mg/kg
Normal value of STP microorganisms	1,8	mg/l
Normal value for the food chain (secondary poisoning)	3,33	mg/kg
Normal value for the terrestrial compartment	0,262	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Chronic local	Acute local	Acute systemic	Chronic systemic
Oral			VND	4,76 mg/kg bw/d				
Inhalation			VND	8,33 mg/m3			VND	33,3 mg/m3
Dermica	111 mg/cm2	VND			222 mg/cm2	VND		

bis (2-ethylhexyl) adipate

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0032	mg/l						
Normal value in marine water	0,0032	mg/l						
Normal value for fresh water sediment	15,6	mg/kg/d						
Normal value for water, intermittent release	0,0032	mg/l						
Normal value of STP microorganisms	35	mg/l						
Normal value for the terrestrial compartment	0,865	mg/kg/d						
Normal value for the terrestrial compartment								
Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				1,3 mg/kg bw/d				
Inhalation				4,4 mg/m3				17,8 mg/m3
Skin				13 mg/kg bw/d				25,5 mg/kg bw/d

2-ethylanthraquinone

Threshold Limit Value

Type	Country	TWA/8h	ppm	STEL/15min	ppm
		mg/m3		mg/m3	
RCP TLV		10	197		

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.

Considering that the use of adequate technical measures should always have priority over personal protective equipment, ensure good ventilation in the workplace through effective local exhaust.

For the choice of personal protective equipment, if necessary, seek advice from your chemical suppliers.

Personal protective equipment must bear the CE mark which certifies their compliance with current regulations.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

Presumably suitable glove materials: nitrile, PVC or PVA (polyvinyl alcohol) with a chemical protection index of at least 5 (breakthrough time > 240 minutes).

For the final choice of the material of the work gloves it is necessary to consider: compatibility, degradation, breakage time and permeation.

In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it is not foreseeable. Gloves have a wear time that depends on the duration and method of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (eg TLV-TWA) of the substance or one or more of the substances present in the product is exceeded (eg in non-ventilated environments, dust or aerosols), it is advisable to wear a mask with filter type A whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (see standard EN 14387). If there are gases or vapors of a different nature and / or gases or vapors with particles (aerosols, fumes, mists, etc.), combined filters must be provided. 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.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS.

Emissions from manufacturing processes, including those from ventilation equipment should be controlled for compliance with environmental protection legislation.

Do not release into the environment. Storage facilities must be equipped with appropriate systems to prevent soil and water contamination in the event of leaks or spills. Prevent the release of undissolved substances or recover them from wastewater. Do not distribute the sludge generated by industrial water treatment on natural soils. Sludge generated by industrial water treatment must be incinerated, kept under containment or treated.

Other information Minimize exposure to mists / vapors / aerosols. Before accessing the storage tanks and starting any type of intervention in a confined space, carry out adequate remediation, check the atmosphere and check the oxygen content and the degree of flammability.

Activities with large dispersion that lead to a probable consistent release of aerosols (e.g. use with airless spray application) are reserved for PROFESSIONAL USE ONLY. Use additional protective measures: Use an approved, air-fed, positive pressure respirator. Air-fed respirators, with an exhaust bottle, may be appropriate when oxygen levels are inadequate, if the gas / vapor hazards are low, and if the capacity / values of the air purifying filters can be exceeded. For high airborne concentrations, also use waterproof clothing to protect the skin and protect the face.

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	characteristic	
Melting point / freezing point	Not available	
Initial boiling point	145 °C	
Flammability	not applicable	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	23 ≤ T ≤ 60 °C	

Auto-ignition temperature	220 °C	
pH	Not applicable	Reason for missing data:substance/mixture is non-soluble (in water)
Kinematic viscosity	Not available	
Solubility	immiscible with water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	1-21 KPa	
Density and/or relative density	0,783	
Relative vapour density	Not available	
Particle characteristics	Not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU) 98,00 % - 758,52 g/litre

Explosive properties not applicable

Oxidising properties not applicable

SECTION 10. Stability and reactivity.

10.1. Reactivity.

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

10.2. Chemical stability.

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

10.3. Possibility of hazardous reactions.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Vapors can form explosive mixtures with air. Contact with strong oxidants (such as peroxides and chromates) can cause a fire hazard. A mixture with nitrates or other strong oxidants (such as chlorates, perchlorates and liquid oxygen) can generate an explosive mass. Sensitivity to heat, friction and shock can not be evaluated in advance.

10.4. Conditions to avoid.

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

10.5. Incompatible materials.

Information not available.

10.6. Hazardous decomposition products.

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Local effects. Product information:

Contact with the skin. Symptoms: Redness. Repeated exposure may cause skin dryness or cracking.

Eye contact: Contact with eyes may cause irritation.

Inhalation: inhalation of vapors may cause drowsiness and dizziness. It can cause irritation. Inhalation of vapors may cause headaches, nausea, vomiting and changes in consciousness.

Ingestion: if accidentally ingested, the product may enter the lungs due to its low viscosity and cause the rapid development of severe lung lesions (keep under medical supervision for 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause depression in the central nervous system.

Other adverse effects

Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headache and dizziness, have an anesthetic effect and cause other effects on the central nervous system. Repeated and / or prolonged skin contact with low viscosity materials can decrease the skin with possible development of irritation and dermatitis. Small amounts of liquid, aspirated into the lungs if swallowed or vomited, may cause chemical pneumonitis or pulmonary edema.

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

ATE (Inhalation) of the mixture: Not classified (no significant component)

ATE (Oral) of the mixture: Not classified (no significant component)

ATE (Dermal) of the mixture: Not classified (no significant component)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

LD50 (Dermal): > 2000 mg/kg

LD50 (Oral): > 5000 mg/kg

LC50 (Inhalation vapours): > 9300 mg/l/4h

d-Limonene

LD50 (Dermal): > 5000 mg/kg Coniglio

LD50 (Oral): > 2000 mg/kg Metodo OECD 423 - Rat (femelle)

bis (2-ethylhexyl) adipate
LD50 (Oral): 24600 mg/kg rat
LC50 (Inhalation vapours): > 5,7 mg/l/4h rat

SKIN CORROSION / IRRITATION

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Repeated exposure may cause skin dryness and cracking. Slightly irritating to the skin in case of prolonged exposure.

bis (2-ethylhexyl) adipate
Method: Read-across with similar or surrogates substances.
Result not irritating.

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
EYE CONTACT: May cause mild, short-term eye problems. Based on test data for structural materials similar to OCSE 405 guidelines.

Bis (2-ethylhexyl) adipate
Method: Read-across with similar substances or surrogates.
Result: non-irritating.

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Respiratory sensitization

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Not assumed to be a respiratory sensitizer.

bis (2-ethylhexyl) adipate
Method: Read-across with similar substances or surrogates.
Result: non-irritating.

Skin sensitization

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Not assumed to be a skin sensitizer to OECD 406 guidelines.

bis (2-ethylhexyl) adipate
Method: Draize test. Intracutaneous test. Induction: intradermal. Challenge: intradermal. Guinea pig male.
Method: Mallette and von Haam, 1952. Induction: no data challenge: no data. Rabbit.
Method: structure-activity relationship models (QSAR)
Result: non-sensitizing (weight of evidence).

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
The mutagenic potential of the substance has been extensively investigated in a range of in-vivo and in-vitro analyzes. Genetic toxicity: negative. It is assumed that it is not a germ cell mutagenic agent. Based on test data for materials of similar structure to OECD guidelines 471 473 474 476 478 479.

bis (2-ethylhexyl) adipate

Based on the studies carried out on the mutagenic potential, the substance appears to have negative genetic toxicity.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

This product is not classified as a carcinogen. It is assumed that it does not cause cancer. Based on test data for materials of similar structure to OECD guideline 453.

bis (2-ethylhexyl) adipate

NOAEL (carcinogenicity): > 25000 ppm (nominal) (male / female).

Neoplastic effects: no effect.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

No information available. It is assumed that it is not a toxic agent for reproduction. Based on test data for materials of similar structure to OECD guidelines 414 421 422.

Adverse effects on sexual function and fertility

bis (2-ethylhexyl) adipate

Method: equivalent or similar to OECD Guidelaine 415 (one-Generation Reproduction Toxicity Study).

Oral: feed. Rat (Wistar) male / female.

Results:

NOAEL (P): approx. 170 mg / kg bw / day (nominal) (male / female)

NOAEL (F1): approx. 170 mg / kg bw / day (nominal) (male / female)

Adverse effects on development of the offspring

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

The results of the studies on the substance related to developmental toxicity, dictated by the OECD guidelines, and those of the screening studies in the same setting did not reveal any tissue in rats.

bis (2-ethylhexyl) adipate

Method: Equivalent or similar to OECD Guidelaine 414 (Prenatal Developmental Toxicity Study) (used to determine limit dose).

Oral: feed. Rat (Wistar)

Results:

NOAEL (maternal toxicity): ca. 170 mg / kg bw / day (nominal)

NOEL (fetotoxicity): 28 mg / kg bw / day (nominal) (male / female)

Effects on or via lactation

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Lactation: Not expected to be harmful to breastfed infants.

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Single Exposure: May cause drowsiness and dizziness. This substance does not meet the EU criteria for classification.

bis (2-ethylhexyl) adipate

Not available

Target organs

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Central nervous system

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Repeated Exposure: Not expected to cause organ damage following prolonged and repeated exposure. Based on test data for materials of similar structure to OECD guideline 408 413 422. No known effects based on information provided.

Target organs

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Central nervous system.

Route of exposure

Information not available

ASPIRATION HAZARD

Toxic for aspiration

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

The fluid can enter the lungs and cause damage (chemical pneumonia, potentially fatal).

bis (2-ethylhexyl) adipate

Not relevant

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information.

The product is considered to be hazardous to the environment and is toxic to aquatic organisms with long-term adverse effects on the aquatic environment.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Use in accordance to the best working practices, avoiding the dispersal of product in the environment. Warn the competent authorities if the product has reached watercourses or drains or if it has contaminated the ground or vegetation. Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC 919-857-5): on the basis of ecological information listed below and according to the criteria indicated by the rules on hazardous substances, this substance is not classified as dangerous for the environment

12.1. Toxicity

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC 919-857-5): here below is given a summary of most representative studies of the Dossier of registration. Aquatic toxicity:

Endpoint: Invertebrates – Short time (Daphnia magna)

Result: EL50 (48 h): >1000 mg/L (mobility); EL50 (24 h): >1000 mg/L (mobility)

Comments: Key studies (C9-C11, <2% aromatics) - OECD Guideline 202 - SRC (1995)

Endpoint: Invertebrates – Short term (Chaetogammarus marinus)

Result: LL50 (48 h): > 1000 mg/L (mortality); LL50 (24 h): >1000 mg/L (mortality)

Comments: Key study (C9-C11 <2 % aromatics) OECD Guideline 202 - TNO (1992)

Endpoint: Invertebrates – Long time (Daphnia magna)

Result: NOELR (21 days): 0,23 mg/L (reproduction)

Comments: Supporting study (C9-C11 <2 % aromatics) (Q)SAR Modeled data - CONCAWE (2010)

Endpoint: Algae (Pseudokirchnerella subcapitata) Inhibition of the growth

Result: EC50 (72 h): > 1000 mg/L (Growth); EC50 (72 h): > 1000 mg/L (biomass); NOELR (72 h): 3 mg/L (Number of cells); NOELR (72 h): 100 mg/L (Growth)

Comments: Key study (C9-C11 <2 % aromatics) OECD Guideline 201 - SRC (1995)

Endpoint: Fishes – Short term (Oncorhynchus mykiss)

Result: LL50 (24 h): >1000 mg/L; LL0 (24 h): 1000 mg/L; LL50 (48 h): >1000 mg/L; LL0 (48 h): 1000 mg/L; LL50 (72 h): >1000 mg/L; LL0 (72 h) mg/L:

Comments: Key study (C9-C11 <2 % aromatics) OECD Guideline 203 - SRC (1995).

d-Limonene

LC50 - for Fish. > 0,72 mg/l/96h

EC50 – for Crustacea 0,85 mg/l/424h Daphnia magna

EC50 - for Algae / Aquatic Plants. 0,32 mg/l/72h Pseudokirchneriella subcapitata

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics

LC50 - for Fish. > 1000 mg/l/96h

EC50 - for Crustacea. > 1000 mg/l/48h

EC50 - for Algae / Aquatic Plants. > 1000 mg/l/72h

bis (2-ethylhexyl) adipate

LC50 – for Fish > 0,78 mg/l/96h oncorhynchus mykiss

EC50 – for Crustacea > 500 mg/l/48h daphnia magna

EC50 - for Algae / Aquatic Plants. > 500 mg/l/72h algae

NOEC Chronic Crustacea 0,77 mg/l daphnia magna, fresh water, semistatic. OECD Guideline 211

12.2. Persistence and degradability.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC#919-857-5):

Abiotic degradability: hydrolysis: this substance is resistant to hydrolysis so this process will not contribute to a measurable loss of degradation of the substance in the environment.

Biotic degradability: according to available studies and to properties of hydrocarbons C9-C16, this substance is considered inherently biodegradable.

Method: Micro-organisms non adapted OECD Guideline 301 F

Result: Promptly biodegradable 80 % (28 days)
Comments: Key Study Reliable without restrictions (C9-C11, <2% aromatics)
Source: Shell (1997).

d-Limonene

Rapidly biodegradable.

Hydrocarbons, C9-C11, n-
alkanes, isoalkanes, cyclics,
< 2% aromatics

Entirely biodegradable.

bis (2-ethylhexyl) adipate

Rapidly biodegradable.

12.3. Bioaccumulative potential.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC#919-857-5): standard tests for this endpoint are not applicable to UVCB substances.

bis (2-ethylhexyl) adipate

BCF 27 l/kg

12.4. Mobility in soil.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC#919-857-5): Koc Absorption: standard tests for this endpoint are not applicable to UVCB substances.

bis (2-ethylhexyl) adipate

Partition coefficient: soil /
water 4,687 l/kg

12.5. Results of PBT and vPvB assessment.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC#919-857-5): Comparison with criteria of attachment XIII of REACH Regulation.

Evaluation of persistence: some structures of hydrocarbons contained in this substance have P (Persistent) or vP (very Persistent) characteristics.

Evaluation of potential of bioaccumulation: the structure of the most part of hydrocarbons contained in this substance DON'T have characteristics of vB (very Bioaccumulative) however some components have characteristics of B (Bioaccumulative).

Evaluation of the toxicity: for hydrocarbon's structures that have shown characteristics of P and B the toxicity has been evaluated but no relevant component meets criteria of toxicity with the exception of anthracene that has been confirmed as a PBT. Because anthracene is not present, the product is not considered PBT/vPvB.

On the basis of the available data, the product does not contain PBT or vPvB substances in percentage $\geq 0.1\%$.

12.6. Other adverse effects.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC#919-857-5): the dispersion in the environment can cause the contamination of environment matrices (air, ground, underground, superficial and underground waters). Use according to best work practices, avoiding the dispersal of product in the environment.

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Hydrocarbures C9-C11, n-alkanes, isoalkanes, cycliques, <2% aromatiques (EC 919-857-5) : La dispersion dans l'environnement peut conduire à la contamination des matrices environnementales (air, sol, sous-sol, eaux de surface et souterraines). Utiliser selon les règles de l'art en évitant de disperser les produits dans l'environnement

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.

SECTION 14. Transport information.**14.1. UN number.**

ADR / RID, IMDG, 3295
IATA:

14.2. UN proper shipping name.

ADR / RID: HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics)

IMDG: HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics)

IATA: HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics)

14.3. Transport hazard class(es).

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3

**14.4. Packing group.**

ADR / RID, IMDG, III
IATA:

14.5. Environmental hazards.

ADR / RID: NO
 IMDG: NO
 IATA: NO

14.6. Special precautions for user.

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	Special Provision: - EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special Instructions:	A3, A324	

14.7. Transport in bulk according to Annex II of MARPOL73/78 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. Dir. 2012/18/EC:
P5c-E2

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

Product.

Point. 3 - 40

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 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. Liq. 3	Flammable liquid, category 3
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
H226	Flammable liquid and vapour.
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 (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EU) 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
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 of European parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of European parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X 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.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 09 / 11 / 12 / 14 / 15 / 16.