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	**dearomatized white spirit and limonene**

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

Sector of use	**SU21 – Professional 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)** **ITALIA**
	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 3357267940
Telephone number of Poison Centers open 24/24 h
CAV Ospedale Niguarda Ca` Granda – Milano 003902 66101029
CAV Ospedale Careggi- Firenze 0039-055 7947819
CAV Policlinico Gemelli – Roma

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:

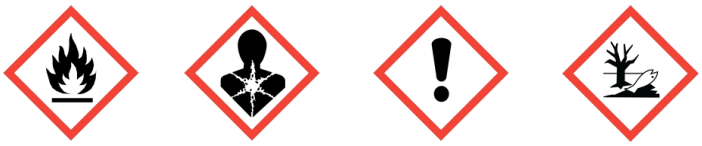
Flammable liquid, category 3	H226	Flammable liquid and vapour.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.

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

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.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification.	**x= Conc. %.**	**Classification 1272/2008 (CLP).**
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics		

CAS. -	50 ≤ x < 100	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336, EUH066, Note P
EC. 919-857-5		
INDEX. -		
Reg. no. 01-2119463258-33		
d-Limonene		
CAS. 5989-27-5	5 ≤ 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 ≤ x < 1,5	
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 -		

Note: Upper limit is not included into the range.

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.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
EYES: rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present and 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, injection of product can occur even without apparent external injury. In this case immediately transfer the injured to hospital. Do not wait until the onset of symptoms.

INHALATION: In case of difficulty breathing remove person to fresh air and keep comfortable for breathing. If the victim is unconscious and not breathing, check the absence of obstacles to breathing and give artificial respiration by trained personnel. If necessary, give 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 until 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.

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. Check incompatibility for container material in section 7. 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.

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

ACGIH TLVs and BEIs – Appendix H	RCP TLV

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

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Chronic local	Acute local	Acute systemic	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

	Effects on consumers				Effects on workers			
Route of exposure	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

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Cronic local	Chronic systemic
Oral				1,3 mg/kg bw/d				
Inahalation				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		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
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.

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. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type 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
Not necessary for normal use.
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 providedRespiratory 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.

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

SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

Appearance	liquid
Colour	colourless
Odour	characteristic
Odour threshold.	Not available.
pH.	Not applicable.
Melting point / freezing point.	Not available.
Initial boiling point.	145 °C.
Boiling range.	Not available.
Flash point.	> 38 °C.
Evaporation rate	Not available.
Flammability (solid, gas)	not applicable
Lower inflammability limit.	Not available.
Upper inflammability limit.	Not available.
Lower explosive limit.	Not available.
Upper explosive limit.	Not available.
Vapour pressure.	1-21 KPa
Vapour density	Not available.
Relative density.	0,782 Kg/l
Solubility	immiscible with water
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature.	220 °C.
Decomposition temperature.	Not available.
Viscosity	1-25cSt at 40°C
Explosive properties	not applicable
Oxidising properties	not applicable

VOC (Directive 2004/42/EC) : 790 gr/lt

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.

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 degrease 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
LC50 (Inhalation) of the mixture: Not classified (no significant component)
LD50 (Oral) of the mixture: Not classified (no significant component)
LD50 (Dermal) of the mixture: Not classified (no significant component)

d-Limonene
LD50 (Oral) > 2000 mg/kg Method OECD 423 - Rat (female)
LD50 (Dermal) > 5000 mg/kg Rabbit

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
LD50 (Oral).> 5000 mg/kg
LD50 (Dermal).> 2000 mg/kg
LC50 (Inhalation).> 9300 mg/l/4h

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

SKIN CORROSION / IRRITATION
Repeated exposure may cause skin dryness or cracking.
Does not meet the classification criteria for this hazard class

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.

RESPIRATORY OR SKIN SENSITISATION
Sensitising for skin.

Respiratory sensitization

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 studied in a range of in-vivo and in-vitro analyzes. Genetic toxicity: negative. It is assumed that it is not a mutagenic agent of germinal cells. Based on test data for structure materials similar to guidelines OCSE 471 473 474 476 478 479.

bis (2-ethylhexyl) adipate
Based on the studies performed on the mutagenic potential the substance results to have a 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 structure materials similar to guidelines OCSE 453.

bis (2-ethylhexyl) adipate
NOAEL (carcinogenicity):> 25,000 ppm (nominal) (male / female).
Neoplastic effects: without 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 structure materials similar to guidelines OCSE 414 421 422.

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): ca. 170 mg / kg bw / day (nominal) (male / female)
NOAEL (F1): ca. 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 substance studies related to developmental toxicity, dictated by the OECD guidelines and those of the screening studies in the same field, did not reveal toxicity in rats.

bis (2-ethylhexyl) adipate
Method: equivalent or similar to OECD Guidelaine 414 (Prenatal Developmental Toxicity Study) (used to determine the limit dose).
Oral: feed. Rat (Wistar)
Results:
NOAEL (mother toxicity): ca. 170 mg / kg bw / day (nominal)
NOEL (foetotoxicity): 28 mg / kg bw / day (nominal) (male / female)

Effects on or via lactation
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Lactation: it is assumed that it is not harmful to breast-fed infants.

STOT - SINGLE EXPOSURE
May cause drowsiness or dizziness

Target organ

bis (2-ethylhexyl) adipate
Not available

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

STOT - REPEATED EXPOSURE
Does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Repeated exposure: it is assumed that it does not cause damage to organs following prolonged and repeated exposure. Based on test data for structural materials similar to OCSE Guidelines 408 413 422. No known effects based on information provided.

Target organ
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Central nervous system

ASPIRATION HAZARD
Toxic for aspiration

bis (2-ethylhexyl) adipate
Not applicable

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
Fluid can enter the lungs and cause damage (chemical, potentially fatal pneumonia).

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: Algaes (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): >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: hydrolisis: this substance is resistant to hydrolisis 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 restrinctions (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) o 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 criterias of toxicity with the except of anthracene that has been confirmed as a PBT. Because of anthracene is not present, the product is not considered PBT/vPvB.

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 matrixes (air, ground, underground, superficial and underground waters). Use according to best work practices, avoiding the dispersal of product in the environment.

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, IATA:	3295

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, IATA:	III

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)
	Special Provision: -		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special Instructions:	A3	

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

Substances in Candidate List (Art. 59 REACH).

Based on the available data, the product does not contain SVHC substances in percentages greater than 0.1%.

Substances subject to authorisarion (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 been developed for the following substances in the mixture:
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics, D-limonene.

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
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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
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8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
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11. Regulation (EU) 2016/918 of European parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
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- 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.

Changes to previous review:
The following sections were modified:
01/02/03/04/07/08/09/10/11/12/14/15/16.