

## 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: 0030285  
 Product name: ACQUABLOCK  
 Chemical name and synonym: ACQUABLOCK

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

Sector of use: SU22 – Professional uses SU21 – Consumer uses  
**Uses advised against. Avoid use:** which involves spray applications (airless) without the use of PPE.  
 Intended use: water repellent consolidating protector for stone materials

#### 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 3357267921  
 Telephone number of PoisonCenters 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 (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:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Eye irritation, category 2	H319	Causes serious eye irritation.

Specific target organ toxicity - single exposure, category 3 H336

May cause drowsiness or dizziness.

## 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:

<b>H226</b>	Flammable liquid and vapour.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H319</b>	Causes serious eye irritation.
<b>H336</b>	May cause drowsiness or dizziness.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P331</b>	Do NOT induce vomiting.
<b>P280</b>	Wear protective gloves/ protective clothing / eye protection / face protection.
<b>P261</b>	Avoid breathing dust / fume / gas / mist / vapours / spray.
<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.
<b>P301+P310</b>	IF SWALLOWED: Immediately call a POISON CENTER / doctor.
<b>P304+P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Contains:** Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics, Tetraethyl orthosilicate

binding primers.

VOC expressed in g / liter of product ready to use: 750.00 (2010) maximum limit

VOC of the product: 650.00

## 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%.

Inhalation of aerosols can cause damage to health.

The product hydrolyzes to form ethanol (CAS No 64-17-5). Ethanol is easily flammable.

## SECTION 3. Composition/information on ingredients

**3.1. Substances.**

Information not applicable.

**3.2. Mixtures**

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, &lt; 2% aromatics</b>		
CAS -	$50 \leq x < 100$	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336, EUH066
EC 919-857-5		
INDEX -		
Reg. no. 01-2119463258-33		
<b>Tetraethyl orthosilicate</b>		
CAS 78-10-4	$10 \leq x < 20$	Flam. Liq. 3 H226, Acute Tox. 4 H332, Eye Irrit. 2 H319, STOT SE 3 H335
EC 201-083-8		
INDEX -		
Reg. no. 01-2119496195-28		
<b>bis (2-ethylhexyl) adipate</b>		
CAS 103-23-1	$1 \leq x < 5$	
CE 203-090-1		
INDEX -		
Nr. Reg. 01-2119439699-19-xxxx		
<b>METHANOL</b>		
CAS 67-56-1	$0 \leq x < 0,5$	Flam. Liq. 2 H225, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370
EC 200-659-6		
INDEX 603-001-00-X		
Nr. Reg. 01-2119433307-44-xxxx		

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 complex UVCB (PrC3), CAS n.a., EC 919-857-5, n. INDEX: n.a. ("C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatic" hydrocarbons. A complex and variable combination of paraffinic, cyclic and aromatic hydrocarbons having carbon numbers predominantly in the C9-C11 range and boiling in the range 130 °C - 210 °C). Some manufacturers provide the following related CAS: 64742-48-9. Applicable Note P of Annex 1. Concentration of benzene <0.1% by weight.

**SECTION 4. First aid measures****4.1. Description of first aid measures**

**EYES:** wash immediately and abundantly with water for at least 15 minutes. Remove contact lenses, if present, if the situation allows to carry out the operation with ease. Continue to rinse. Consult a doctor immediately.

**SKIN:** wash immediately and abundantly with soap and water. Take off contaminated clothing. In case of irritation, swelling or redness, consult a specialist doctor. Wash the contaminated garments before reusing them. For thermal burns, cool the injured part. Keep the burned area under running cold water for at least five minutes or until the pain disappears. Avoid a general hypothermia. During the use of high pressure equipment, a product injection can occur even without apparent external injury. In this case, immediately transfer the injured person to the hospital. Do not wait for the symptoms to appear.

**INHALATION:** In case of difficult breathing, bring the injured person in the open air and keep it in a comfortable position for breathing. If the injured person is unconscious and does not breathe, check the absence of obstacles to breathing and perform artificial respiration by specialized personnel. If necessary, carry out an external cardiac massage and consult a doctor. If the injured person is breathing, keep him in a safe side position. Administer oxygen if necessary.

**INGESTION:** do not induce vomiting to avoid the risk of aspiration. Immediately transport the injured person to the hospital. Do not wait for the symptoms to appear. In the case of spontaneous vomiting, keep the head down to avoid the risk of aspiration of vomiting 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.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.)

from the leakage site.

## 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. If the product is flammable, use an explosion-proof device. Evaluate the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material.

Provide sufficient ventilation of the place affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of section 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

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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. 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. Avoid leakage of the product into the environment.

## 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

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 facilities 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 in a confined space, make an adequate reclamation, check 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 only 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, puncture, 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:

FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diaro da Republica I 26; 2012-02-06
EU	OEL EU TLV-ACGIH	Directive (EU) 2017/164; Directive 2009/161 / EU; Directive 2006/15 / EC; Directive 2004/37 / EC; Directive 2000/39 / EC; Directive 91/322 / EEC ACGIH 2017
	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	Chronic 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

**Tetraethyl orthosilicate****Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min					
		mg/m3	ppm	mg/m3	ppm				
VLEP	ITA		10						
<b>Predicted no-effect concentration - PNEC</b>									
Normal value in fresh water				0,192		mg/l			
Normal value in marine water				0,0192		mg/l			
Normal value for fresh water sediment				0,18		mg/kg			
Normal value for marine water sediment				0,018		mg/kg			
Normal value of STP microorganisms				4000		mg/l			
<b>Health - Derived no-effect level - DNEL / DMEL</b>									
		Effects on consumers			Effects on workers				
Route of exposure		Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Chronic local	Acute systemic	Chronic systemic
Inhalation		25 mg/m3	25 mg/m3	25 mg/m3	25 mg/m3	85 mg/m3	85 mg/m3	85 mg/m3	85 mg/m3
Skin	VND	VND	8,4 mg/kg/d	VND	8,4 mg/kg/d	VND	12,1 mg/kg/d	VND	12,1 mg/kg/d
<b>bis (2-ethylhexyl) adipate</b>									
<b>Predicted no-effect concentration - PNEC</b>									
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			
<b>Health - Derived no-effect level - DNEL / DMEL</b>									
		Effects on consumers			Effects on workers				
Route of exposure		Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Chronic local	Acute systemic	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
<b>METHANOL</b>									
<b>Threshold Limit Value</b>									
Type	Country	TWA/8h		STEL/15min					
		mg/m3	ppm	mg/m3	ppm				
VLEP	FRA	260	200	1300	1000	SKIN			
WEL	GBR	266	200	333	250	SKIN			
VLEP	ITA	260	200			SKIN			
VLE	PRT	260	200			SKIN			
OEL	EU	260	200			SKIN			
TLV-ACGIH		262	200	328	250				

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.

### HAND PROTECTION

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

Materials presumably suitable for gloves: nitrile, PVC or PVA (polyvinylalcohol) with an index of protection against chemical agents of at least 5 (permeation time > 240 minutes).

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 I 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. The activities with great dispersion that lead to a probable release of aerosols (eg use with spray application with airless system) are reserved for EXCLUSIVE PROFESSIONAL USE.

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

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.

The activities with great dispersion that lead to a probable release of aerosols (eg use with spray application with airless system) are reserved for EXCLUSIVE PROFESSIONAL USE. Use additional protective measures: use an approved air-powered respirator operating at positive pressure. Air-fed respirators with a waste bottle may be appropriate when oxygen levels are inadequate, if the risks of gases / vapors are low, and if the capacity / values of air-purifying filters can be exceeded. For high airborne concentrations, also use waterproof clothing to protect the skin and protect the face.

### ENVIRONMENTAL EXPOSURE CONTROLS

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

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 the treatment of industrial waters on natural soils. The sludge generated by the treatment of industrial waters must be incinerated, kept under containment or treated.

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

## SECTION 9. Physical and chemical properties



**9.1. Information on basic physical and chemical properties**

Appearance	liquid
Colour	colourless
Odour	characteristic of solvent
Odour threshold	Not available
pH	Not applicable
Melting point / freezing point	Not available
Initial boiling point	165 °C
Boiling range	165°-190°
Flash point	41 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	0,852 kg/lt
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

**9.2. Other information**

VOC (Directive 2004/42/EC) :	650,00 g/litre
VOC (volatile carbon) :	62,72 % - 534,37 g/litre.

**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**

The vapours may also form explosive mixtures with the air.

**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

In the absence of experimental toxicological data on the product itself, the possible dangers of the product for health have been evaluated on the basis of the properties of the substances contained, according to the criteria provided for by the reference standard for classification. Consider therefore the concentration of the individual hazardous substances mentioned in section 3, to evaluate the toxicological effects deriving from exposure to the product.

### 11.1. Information on toxicological effects

**METHANOL** The minimum lethal dose for humans by ingestion is considered in the range of 300 to 1000 mg / kg. The ingestion of 4-10 ml of the substance can cause permanent blindness (IPCS) in the adult man.

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 can cause headaches, nausea, vomiting and alterations in the state of 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.

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

The results show that these fluids are rapidly absorbed by inhalation or by ingestion and can be absorbed by the dermal route. In any case, they are metabolized and eliminated quickly. Bioaccumulation is not foreseeable. The aromatic components are metabolized faster than naphthenes, n-alkanes, isoalkanes and 1-alkenes. This substance has a low acute toxicity with an oral rat LD50 greater than 5000 mg / kg, a rabbit dermal LD50 greater than 2000 mg / kg and an inhaled rat LC50 above 5000 mg / l. No significant effects were observed. The substance is therefore not classified for acute toxicity according to European regulations on hazardous substances. The substance is classified as dangerous for the danger of aspiration into the lungs.

### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

### Information on likely routes of exposure

METHANOL

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

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

METHANOL

The minimum lethal dose for humans by ingestion is considered to be in the range from 300 to 1000 mg/kg. Ingestion of 4-10 ml of the substance may cause permanent blindness in adult humans (IPCS).

### Interactive effects

Information not available

#### ACUTE TOXICITY

LC50 (Inhalation) of the mixture:

> 20 mg/l

LD50 (Oral) of the mixture:

Not classified (no significant component)

LD50 (Dermal) of the mixture:

Not classified (no significant component)

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

LD50 (Oral) 24600 mg/kg rat

LC50 (Inhalation) > 5,7 mg/l/4h rat

Tetraethyl orthosilicate

LD50 (Oral) > 2500 mg/kg rat

LD50 (Dermal) > 5878 mg/kg rabbit

LC50 (Inhalation) > 10 mg/l/4h

#### 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 substances or surrogates.

Result: not irritant

#### 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 OECD 405 guidelines.

bis (2-ethylhexyl) adipate

Method: Read-across with similar substances or surrogates.

Result: not irritant

#### RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

Respiratory sensitization

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

Respiratory sensitization

bis (2-ethylhexyl) adipate

Method: Read-across with similar substances or surrogates.

Result: not irritant

It is assumed that it is not respiratory sensitizer.

Skin sensitization

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

It is assumed that it is not a skin sensitizer to OECD 406 guidelines.

Skin sensitization

bis (2-ethylhexyl) adipate

Method: Draize test. Intracutaneous test. Induction: intradermal. Challenge: intradermale. Guinea pig male.

Method: Mallette and von Haam, 1952. Induction: no data challenge: no data. Rabbit.

Method: models based on structure-activity relationships (QSAR)

Result: non-sensitizer (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 studied in a range of in-vivo and in-vitro analyzes. Genetic toxicity: negative. It is assumed that it is not a mutagenic germline 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 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 carcinogenic. It is assumed that it does not cause cancer. Based on test data for structural materials similar to OECD Guidelines 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 structural materials similar to OECD Guidelines 414 421 422.

Harmful 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): ca. 170 mg / kg bw / day (nominal) (male / female)

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

Harmful effects on the development of 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 tissue in the rats.

Harmful effects on the development of offspring

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 lactation or through breastfeeding

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

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

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

bis (2-ethylhexyl) adipate

Not available

Target organs

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 OECD 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

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

Fluid can enter the lungs and cause damage (chemical, potentially fatal pneumonia).  
bis (2-ethylhexyl) adipate  
Not applicable

## SECTION 12. Ecological information

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

Use according to good working practices, avoiding to disperse the product in the environment. Notify the competent authorities if the product has reached watercourses or sewers or if it has contaminated the soil or vegetation. Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics (EC 919-857-5): Based on the ecological information given below and according to the criteria set by the regulations 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

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

Endpoint: Invertebrates - Short term (Daphnia magna)

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

Comments: Key Study (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)

Endpoints: Invertebrates - Long term (Daphnia magna)

Result: NOELR (21 days): 0.23 mg / L (reproduction)

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

Endpoint: Algae (Pseudokirchnerella subcapitata) Growth inhibition

Result: EC50 (72 h):> 1000 mg / L (Growth); EC50 (72 h):> 1000 mg / L (biomass); NOELR (72 h): 3 mg / L (Cell number); NOELR (72 h): 100 mg / L (Growth)

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

Endpoint: Fish - 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).

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

Tetraethyl orthosilicate

LC50 - for Fish > 245 mg/l/96h

EC50 - for Crustacea > 75 mg/l/48h

EC50 - for Algae / Aquatic Plants > 100 mg/l/72h

bis (2-ethylhexyl) adipate

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

EC50 - Crustacea > 500 mg/l/48h daphnia magna

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

NOEC Cronica 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

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

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

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

Method: Non-adapted microorganisms OECD Guideline 301 F

Result: Readily biodegradable 80% (28 days)

Comments: Key study Reliable without restrictions (C9-C11, <2% aromatics)

Source: Shell (1997).

**METHANOL**

Solubility in water 1000 - 10000 mg/l

Rapidly degradable

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

**Tetraethyl orthosilicate**

Rapidly degradable

bis (2-ethylhexyl) adipate

Rapidly degradable

**12.3. Bioaccumulative potential**

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

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

**METHANOL**

Partition coefficient: n-octanol/water -0,77

BCF 0,2

bis (2-ethylhexyl) adipate

BCF 27 l/kg

**12.4. Mobility in soil**

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

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

**12.5. Results of PBT and vPvB assessment**

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

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

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

Assessment of bioaccumulation potential: the structure of most of the hydrocarbons contained in this substance do NOT present characteristics of vB (very Bioaccumulative) however some components exhibit characteristics of B (Bioaccumulative).

Evaluation of toxicity: for the hydrocarbon structures that showed characteristics of P and B the toxicity was evaluated but none relevant component meets the toxicity criteria with the exception of anthracene which has been confirmed as a PBT. Because 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

Hydrocarbons C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics (EC 919-857-5)The dispersion in the environment can lead to the contamination of environmental matrices

(air, soil, subsoil, surface and underground waters). Use according to good working practice, avoiding to disperse the products 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, 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)
	Special Provision: -		
IMDG:	EMS: F-E, <u>S-E</u>	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 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: P5c

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)

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. Evaluation of chemical safety.

A chemical safety assessment has been developed for the following substances in the mixture:

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

### SECTION 16. Other information

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

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Acute Tox. 3</b>	Acute toxicity, category 3
<b>STOT SE 1</b>	Specific target organ toxicity - single exposure, category 1
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H226</b>	Flammable liquid and vapour.
<b>H301</b>	Toxic if swallowed.
<b>H311</b>	Toxic in contact with skin.
<b>H331</b>	Toxic if inhaled.
<b>H370</b>	Causes damage to organs.
<b>H332</b>	Harmful if inhaled.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H319</b>	Causes serious eye irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H336</b>	May cause drowsiness or dizziness.
<b>EUH066</b>	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
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
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  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
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  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.

**Changes to previous review:**

The following sections were modified:

01