

## ORTHABOND

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### SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING.

#### 1.1 Product identifier.

Product Name: ORTHABOND

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

Adhesives

#### Uses advised against:

Uses other than those recommended.

#### 1.3 Details of the supplier of the safety data sheet.

Company: **A. ALGEO LTD.**  
Address: Sheridan House, Bridge Industrial Estate, Speke Hall Road  
City: Liverpool  
Post Code: L24 9HB  
Telephone: +44 (0)151 448 1228  
Fax: +44 (0)151 448 1008  
E-mail: info@algeos.com  
Web: www.algeos.com

**1.4 Emergency telephone number:** +44 (0)151 448 1228 (Only available during office hours; Monday-Friday; 09:00-17:00)

### SECTION 2: HAZARDS IDENTIFICATION.

#### 2.1 Classification of the mixture.

In accordance with Regulation (EU) No 1272/2008:

Aquatic Chronic 2 : Toxic to aquatic life with long lasting effects.

Eye Irrit. 2 : Causes serious eye irritation.

Flam. Liq. 2 : Highly flammable liquid and vapour.

Skin Irrit. 2 : Causes skin irritation.

STOT SE 3 : May cause drowsiness or dizziness.

#### 2.2 Label elements.

##### Labelling in accordance with Regulation (EU) No 1272/2008:

##### Pictograms:



Signal Word:

**Danger**

H statements:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

P statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P261	Avoid breathing vapours

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P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P370+P378 In case of fire: Use foam or dry powder for extinction.  
P403+P235 Store in a well-ventilated place. Keep cool.

**EUH statements:**

EUH208 Contains Rosin. May produce an allergic reaction.  
Restricted to professional users.

**Contains:**

hexane, mixture of isomers (containing < 5 % n-hexane (203-777-6))  
cyclohexane  
butanone,ethyl methyl ketone  
ethyl acetate

### 2.3 Other hazards.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

### 3.1 Substances.

Not Applicable.

### 3.2 Mixtures.

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	specific concentration limit
Index No: 601-017-00-1 CAS No: 110-82-7 EC No: 203-806-2 Registration No: 01-2119463273-41-XXXX	[1] cyclohexane	20 - 24.99 %	Aquatic Acute 1, H400 - Aquatic Chronic 1, H410 - Asp. Tox. 1, H304 - Flam. Liq. 2, H225 - Skin Irrit. 2, H315 - STOT SE 3, H336	-
Index No: 601-007-00-7 EC No: 931-254-9 Registration No: 01-2119484651-34-0000	[1] hexane, mixture of isomers (containing < 5 % n-hexane (203-777-6))	20 - 24.99 %	Aquatic Chronic 2, H411 - Asp. Tox. 1, H304 - Flam. Liq. 2, H225 - Skin Irrit. 2, H315 - STOT SE 3, H336	-
Index No: 607-022-00-5 CAS No: 141-78-6 EC No: 205-500-4 Registration No: 01-2119475103-46-XXXX	[1] ethyl acetate	20 - 24.99 %	Eye Irrit. 2, H319 - Flam. Liq. 2, H225 - STOT SE 3, H336	-
Index No: 606-002-00-3 CAS No: 78-93-3 EC No: 201-159-0 Registration No: 01-2119457290-43-XXXX	[1] butanone,ethyl methyl ketone	1 - 9.99 %	Eye Irrit. 2, H319 - Flam. Liq. 2, H225 - STOT SE 3, H336	-

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CAS No: 1309-48-4 EC No: 215-171-9	[1] magnesium oxide	0 - 2.49 %	-	-
Index No: 650-015-00-7 CAS No: 8050-09-7 EC No: 232-475-7 Registration No: 01-2119480418-32-XXXX	[1] Rosin	0.1 - 0.99 %	Skin Sens. 1, H317	-
Index No: 030-013-00-7 CAS No: 1314-13-2 EC No: 215-222-5 Registration No: 01-2119463881-32-XXXX	zinc oxide	0.1 - 0.249 %	Aquatic Acute 1, H400 - Aquatic Chronic 1, H410	-
Index No: 605-001-00-5 CAS No: 50-00-0 EC No: 200-001-8 Registration No: 01-2119488953-20-XXXX	[1] formaldehyde	0 - 0.099 %	Acute Tox. 3 *, H311 - Acute Tox. 3 *, H331 - Acute Tox. 3 *, H301 - Carc. 1B, H350 - Muta. 2, H341 - Skin Corr. 1B, H314 - Skin Sens. 1, H317	Skin Corr. 1B, H314: C ≥ 25 % Skin Irrit. 2, H315: 5 % ≤ C < 25 % Eye Irrit. 2, H319: 5 % ≤ C < 25 % STOT SE 3, H335: C ≥ 5 % Skin Sens. 1, H317: C ≥ 0,2 %

(\*) The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

\* See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.

[1] Substance with a Community workplace exposure limit (see section 8.1).

### SECTION 4: FIRST AID MEASURES.

**IRRITANT PREPARATION.** Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

#### 4.1 Description of first aid measures.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

#### Inhalation.

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

#### Eye contact.

Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance. Don't let the person to rub the affected eye.

#### Skin contact.

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

#### Ingestion.

If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

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

Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. Cover the affected area with a dry sterile bandage. Protect the affected area from pressure or friction.

## **SECTION 5: FIREFIGHTING MEASURES.**

The product is Highly inflammable, it can cause or considerably worsen a fire, the necessary prevention measures should be taken and risks avoided. In case of fire, the following measures are recommended:

### **5.1 Extinguishing media.**

#### **Suitable extinguishing media:**

Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcohol-resistant foam and water spray.

#### **Unsuitable extinguishing media:**

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

### **5.2 Special hazards arising from the mixture.**

#### **Special risks.**

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

During a fire and depending on its magnitude the following may occur:

- Flammable vapors or gases.

### **5.3 Advice for firefighters.**

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. Product residues and extinguishing media may contaminate the aquatic environment. Follow the instructions given in the emergency or fire evacuation plan or plans if available.

#### **Fire protection equipment.**

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots. During extinction and depending on the magnitude and proximity to the fire, additional protective equipment such as chemical protection gloves, heat-reflecting suits or gas-tight suits may be required.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES.**

### **6.1 Personal precautions, protective equipment and emergency procedures.**

Eliminate possible ignition points and ventilate the area. No smoking. Avoid breathing fumes. For exposure control and individual protection measures, see section 8.

### **6.2 Environmental precautions.**

Product dangerous for the environment, in case of large spills or if the product contaminates lakes, rivers, or sewers, inform the responsible authorities according to local legislation. Prevent the contamination of drains, surface or subterranean waters, and the ground.

### **6.3 Methods and material for containment and cleaning up.**

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate decontaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

### **6.4 Reference to other sections.**

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

## **SECTION 7: HANDLING AND STORAGE.**

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### 7.1 Precautions for safe handling.

The fumes are heavier than air and can spread across the ground. They can form explosive mixtures with air. Prevent the creation of flammable or explosive fume concentrations in the air; prevent fume concentrations above work exposure limits. The product must only be used in areas where all unprotected flames and other ignition points have been eliminated. Electrical equipment has to be protected according to applicable standards.

The product can be electrostatically charged: always use earth grounds when transferring the product. Operators must use anti-static footwear and clothing, and floors must be conductors.

Keep the container tightly closed and isolated from heat sources, sparks, and fire. Do not use tools that can cause sparks. For personal protection, see section 8.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

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

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 35° C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Classification and threshold amount of storage in accordance with Annex I to Directive 2012/18/EU (SEVESO III):

Code	Description	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
P5b	FLAMMABLE LIQUIDS	50	200
E2	ENVIRONMENTAL HAZARDS - Hazardous to the Aquatic Environment in Category Chronic 2	200	500

### 7.3 Specific end use(s).

See technical data sheet

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

### 8.1 Control parameters.

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	mg/m <sup>3</sup>
cyclohexane	110-82-7	European Union [1]	<b>Eight hours</b>	200	700
			<b>Short term</b>		
		United Kingdom [2]	<b>Eight hours</b>	100	350
			<b>Short term</b>	300	1050
hexane, mixture of isomers (containing < 5 % n-hexane (203-777-6))		United Kingdom [2]	<b>Eight hours</b>	500	1790
			<b>Short term</b>	1000	3580
		European Union [1]	<b>Eight hours</b>	200	734
			<b>Short term</b>	400	1468
ethyl acetate	141-78-6	United Kingdom [2]	<b>Eight hours</b>	200	
			<b>Short term</b>	400	
		European Union [1]	<b>Eight hours</b>	200	600
			<b>Short term</b>	300	900
butanone, ethyl methyl ketone	78-93-3	United Kingdom [2]	<b>Eight hours</b>	200	600
			<b>Short term</b>	300	899
		European Union [1]	<b>Eight hours</b>	200	600
			<b>Short term</b>	300	899
magnesium oxide	1309-48-4	United Kingdom [2]	<b>Eight hours</b>		10 (inhalable dust) 4 (fume and respirable dust)
			<b>Short term</b>		
Rosin	8050-09-7	United	<b>Eight hours</b>		0,05

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		Kingdom [2]	<b>Short term</b>		0,15
formaldehyde	50-00-0	United Kingdom [2]	<b>Eight hours</b>	2	2,5
			<b>Short term</b>	2	2,5

[1] According both Binding Occupational Exposure Limits (BOELVs) and Indicative Occupational Exposure Limits (IOELVs) adopted by Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL).

[2] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adopted by Health and Safety Executive.

The product does NOT contain substances with Biological Limit Values.

Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
cyclohexane CAS No: 110-82-7 EC No: 203-806-2	DNEL (Workers)	Inhalation, Long-term, Local effects	700 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Long-term, Systemic effects	700 (mg/m <sup>3</sup> )
ethyl acetate CAS No: 141-78-6 EC No: 205-500-4	DNEL (Workers)	Inhalation, Long-term, Systemic effects	734 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Long-term, Local effects	734 (mg/m <sup>3</sup> )
	DNEL (General population)	Inhalation, Long-term, Local effects	367 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Acute, Local effects	1468 (mg/m <sup>3</sup> )
	DNEL (General population)	Inhalation, Acute, Local effects	734 (mg/m <sup>3</sup> )
	DNEL (Workers)	Dermal, Long-term, Systemic effects	63 (mg/kg bw/day)
	DNEL (General population)	Dermal, Long-term, Systemic effects	37 (mg/kg bw/day)
	DNEL (Workers)	Dermal, Long-term, Systemic effects	1161 (mg/kg bw/day)
butanone,ethyl methyl ketone CAS No: 78-93-3 EC No: 201-159-0	DNEL (Workers)	Inhalation, Long-term, Systemic effects	600 (mg/m <sup>3</sup> )
	DNEL (General population)	Inhalation, Long-term, Systemic effects	106 (mg/m <sup>3</sup> )
	DNEL (Workers)	Dermal, Long-term, Systemic effects	1161 (mg/kg bw/day)
	DNEL (General population)	Dermal, Long-term, Systemic effects	412 (mg/kg bw/day)
	DNEL (General population)	Oral, Long-term, Systemic effects	31 (mg/kg bw/day)
	DMEL (General population)	Inhalation, Long-term, Systemic effects	106 (mg/m <sup>3</sup> )
	DMEL (General population)	Dermal, Long-term, Systemic effects	412 (mg/m <sup>3</sup> )
Rosin CAS No: 8050-09-7 EC No: 232-475-7	DNEL (Workers)	Inhalation, Long-term, Systemic effects	176 (mg/m <sup>3</sup> )
zinc oxide CAS No: 1314-13-2 EC No: 215-222-5	DNEL (Workers)	Inhalation, Long-term, Systemic effects	5 (mg/m <sup>3</sup> )
formaldehyde CAS No: 50-00-0 EC No: 200-001-8	DNEL (Workers)	Inhalation, Long-term, Local effects	0,5 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Long-term, Systemic effects	9 (mg/m <sup>3</sup> )

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

Concentration levels PNEC:

Name	Details	Value
ethyl acetate	aqua (freshwater)	0,24 (mg/L)

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CAS No: 141-78-6 EC No: 205-500-4	aqua (marine water)	0,024 (mg/L)
	aqua (intermittent releases)	1,65 (mg/L)
	sediment (freshwater)	1,15 (mg/L)
	sediment (marine water)	0,115 (mg/L)
	Soil	0,148 (mg/kg soil dw)
	PNEC STP	650 (mg/L)
	oral (Hazard for predators)	0,2 (g/kg food)
butanone,ethyl methyl ketone CAS No: 78-93-3 EC No: 201-159-0	aqua (freshwater)	55,8 (mg/L)
	aqua (marine water)	55,8 (mg/L)
	Soil	22,5 (mg/kg soil dw)
	aqua (intermittent releases)	55,8 (mg/L)
	PNEC STP	709 (mg/L)
	sediment (freshwater)	284,74 (mg/kg sediment dw)
	sediment (marine water)	284,7 (mg/kg sediment dw)
	oral (Hazard for predators)	1000 (mg/kg food)

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

### 8.2 Exposure controls.

#### Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<b>Concentration:</b>		<b>100 %</b>		
<b>Uses:</b>		<b>Adhesives</b>		
<b>Breathing protection:</b>				
PPE:	Filter mask for protection against gases and particles.			
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form in order to be sealed and watertight.			
CEN standards:	EN 136, EN 140, EN 405			
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor.			
Observations:	Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach the necessary filters to the equipment according to the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX), changing them as advised by the manufacturer.			
Filter Type needed:	A2			
<b>Hand protection:</b>				
PPE:	Protective gloves against chemicals.			
Characteristics:	«CE» marking, category III.			
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420			
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.			
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.			
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.):	> 480	Material thickness (mm): 0,35
<b>Eye protection:</b>				
PPE:	Protective goggles with built-in frame.			
Characteristics:	«CE» marking, category II. Eye protector with built-in frame for protection against splashing liquid, dust, smoke, fog and vapour.			
CEN standards:	EN 165, EN 166, EN 167, EN 168			

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Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.
Observations:	Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.
<b>Skin protection:</b>	
PPE:	Anti-static protective clothing.
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.
CEN standards:	EN 340, EN 1149-1, EN 1149-2, EN 1149-3, EN 1149-5
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.
PPE:	Anti-static safety footwear.
Characteristics:	«CE» marking, category II.
CEN standards:	EN ISO 13287, EN ISO 20344, EN ISO 20346
Maintenance:	The footwear should be checked regularly
Observations:	The level of comfort during use and acceptability are factors that are assessed very differently depending on the user. Therefore, it is advisable to try on different footwear models and, if possible, different widths.



## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

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

Appearance: Viscous liquid with characteristic odour

Colour: N.A./N.A.

Odour: N.A./N.A.

Odour threshold: N.A./N.A.

pH: N.A./N.A.

Melting point: N.A./N.A.

Boiling Point: 60 °C

Flash point: -16 °C

Evaporation rate: N.A./N.A.

Inflammability (solid, gas): N.A./N.A.

Lower Explosive Limit: 1

Upper Explosive Limit: 12.8

Vapour pressure: 91,435

Vapour density: 2.9

Relative density: 0.81

Solubility: N.A./N.A.

Liposolubility: N.A./N.A.

Hydrosolubility: N.A./N.A.

Partition coefficient (n-octanol/water): N.A./N.A.

Auto-ignition temperature: 514°C

Decomposition temperature: N.A./N.A.

Viscosity: 1000-2500

Explosive properties: N.A./N.A.

Oxidizing properties: N.A./N.A.

N.A./N.A. = Not Available/Not Applicable due to the nature of the product

### 9.2 Other information.

Pour point: N.A./N.A.

Blink: N.A./N.A.

Kinematic viscosity: N.A./N.A.

N.A./N.A. = Not Available/Not Applicable due to the nature of the product

## SECTION 10: STABILITY AND REACTIVITY.

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### 10.1 Reactivity.

The product does not present hazards by their reactivity.

### 10.2 Chemical stability.

Stable under the recommended handling and storage conditions (see section 7).

### 10.3 Possibility of hazardous reactions.

The product does not present possibility of hazardous reactions.

### 10.4 Conditions to avoid.

Avoid any improper handling.

### 10.5 Incompatible materials.

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

### 10.6 Hazardous decomposition products.

No decomposition if used for the intended uses.

## SECTION 11: TOXICOLOGICAL INFORMATION.

1-component preparations: during curing, formaldehyde is released. This can cause irreversible effects, it is a mucous membrane irritant, and it can cause skin sensitivity.

IRRITANT PREPARATION. Splatters in the eyes can cause irritation.

IRRITANT PREPARATION. Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

IRRITANT PREPARATION. The inhalation of spray mist or suspended particulates can irritate the respiratory tract. It can also cause serious respiratory difficulties, central nervous system disorders, and in extreme cases, unconsciousness.

### 11.1 Information on toxicological effects.

There are no tested data available on the product.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Splatters in the eyes can cause irritation and reversible damage.

a) acute toxicity;

Not conclusive data for classification.

b) skin corrosion/irritation;

Product classified:

Skin irritant, Category 2: Causes skin irritation.

c) serious eye damage/irritation;

Product classified:

Eye irritation, Category 2: Causes serious eye irritation.

d) respiratory or skin sensitisation;

Based on available data, the classification criteria are not met.

e) germ cell mutagenicity;

Based on available data, the classification criteria are not met.

f) carcinogenicity;

Based on available data, the classification criteria are not met.

g) reproductive toxicity;

Not conclusive data for classification.

h) STOT-single exposure;

Product classified:

Specific target organ toxicity following a single exposure, Category 3:

i) STOT-repeated exposure;

Not conclusive data for classification.

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j) aspiration hazard;  
Based on available data, the classification criteria are not met.

### SECTION 12: ECOLOGICAL INFORMATION.

#### 12.1 Toxicity.

No information is available regarding the ecotoxicity of the substances present.

#### 12.2 Persistence and degradability.

No information is available regarding the biodegradability of the substances present.  
No information is available on the degradability of the substances present. No information is available about persistence and degradability of the product.

#### 12.3 Bioaccumulative potential.

**Information about the bioaccumulation of the substances present.**

Name	Bioaccumulation			
	Log Pow	BCF	NOECs	Level
ethyl acetate CAS No: 141-78-6      EC No: 205-500-4	0,73	-	-	
butanone, ethyl methyl ketone CAS No: 78-93-3      EC No: 201-159-0	0,29	-	-	

#### 12.4 Mobility in soil.

No information is available about the mobility in soil.  
The product must not be allowed to go into sewers or waterways.  
Prevent penetration into the ground.

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

No information is available about the results of PBT and vPvB assessment of the product.

#### 12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

### SECTION 13 DISPOSAL CONSIDERATIONS.

#### 13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.  
Follow the provisions of Directive 2008/98/EC regarding waste management.

### SECTION 14: TRANSPORT INFORMATION.

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.

**Land:** Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

**Sea:** Transport by ship: IMDG.

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Transport documentation: Bill of lading

**Air:** Transport by plane: ICAO/IATA.

Transport document: Airway bill.

### 14.1 UN number.

UN No: UN1133

### 14.2 UN proper shipping name.

Description:

ADR: UN 1133, ADHESIVES, 3, PG II, (D/E)

IMDG: UN 1133, ADHESIVES (CYCLOHEXANE), 3, PG II, MARINE POLLUTANT

ICAO/IATA: UN 1133, ADHESIVES, 3, PG II

### 14.3 Transport hazard class(es).

Class(es): 3

### 14.4 Packing group.

Packing group: II

### 14.5 Environmental hazards.

Marine pollutant: Yes



Dangerous for the environment

### 14.6 Special precautions for user.

Labels: 3



Hazard number: 33

ADR LQ: 5 L

IMDG LQ: 5 L

ICAO LQ: 1 L

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR.

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-E,S-D

Proceed in accordance with point 6.

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

The product is not transported in bulk.

## SECTION 15: REGULATORY INFORMATION.

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Volatile organic compound (VOC)

VOC content (p/p): 77,066 %

VOC content: 624,236 g/l

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Product classification according to Annex I of Directive 1218/18/EU (SEVESO III): P5b,E2

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles:

Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as carcinogen category 1A or 1B (Table 3.1) or carcinogen category 1 or 2 (Table 3.2) and listed as follows: - Carcinogen category 1A (Table 3.1)/carcinogen category 1 (Table 3.2) listed in Appendix 1 - Carcinogen category 1B (Table 3.1)/carcinogen category 2 (Table 3.2) listed in Appendix 2	1. Shall not be placed on the market, or used, - as substances, - as constituents of other substances, or, - in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than: - either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, - the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: 'Restricted to professional users'. 2. By way of derogation, paragraph 1 shall not apply to: (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC; (b) cosmetic products as defined by Directive 76/768/EEC; (c) the following fuels and oil products: - motor fuels which are covered by Directive 98/70/EC, - mineral oil products intended for use as fuel in mobile or fixed combustion plants, - fuels sold in closed systems (e.g. liquid gas bottles); (d) artists' paints covered by Directive 1999/45/EC; (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.
57. Cyclohexane CAS No 110-82-7 EC No 203-806-2	1. Shall not be placed on the market for the first time after 27 June 2010, for supply to the general public, as a constituent of neoprene-based contact adhesives in concentrations equal to or greater than 0,1 % by weight in package sizes greater than 350 g. 2. Neoprene-based contact adhesives containing cyclohexane and not conforming to paragraph 1 shall not be placed on the market for supply to the general public after 27 December 2010. 3. Without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that neoprene-based contact adhesives containing cyclohexane in concentrations equal to or greater than 0,1 % by weight that are placed on the market for supply to the general public after 27 December 2010 are visibly, legibly and indelibly marked as follows: '- This product is not to be used under conditions of poor ventilation. - This product is not to be used for carpet laying.'

Kind of pollutant for the water (Germany): WGK 2: Hazardous for the water. (Autoclassified according to the AwSV Regulations)

### 15.2 Chemical safety assessment.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## SECTION 16: OTHER INFORMATION.

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Complete text of the H phrases that appear in section 3:

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Classification codes:

Acute Tox. 3 : Acute toxicity (Dermal), Category 3  
Acute Tox. 3 : Acute toxicity (Inhalation), Category 3  
Acute Tox. 3 : Acute toxicity (Oral), Category 3  
Aquatic Acute 1 : Acute toxicity to the aquatic environment, Category 1  
Aquatic Chronic 1 : Chronic effect to the aquatic environment, Category 1  
Aquatic Chronic 2 : Chronic effect to the aquatic environment, Category 2  
Asp. Tox. 1 : Aspiration toxicity, Category 1  
Carc. 1B : Carcinogen, Category 1B  
Eye Irrit. 2 : Eye irritation, Category 2  
Flam. Liq. 2 : Flammable liquid, Category 2  
Muta. 2 : Mutagen, Category 2  
Skin Corr. 1B : Skin Corrosive, Category 1B  
Skin Irrit. 2 : Skin irritant, Category 2  
Skin Sens. 1 : Skin sensitiser, Category 1  
STOT SE 3 : Specific target organ toxicity following a single exposure, Category 3

Sections changed compared with the previous version:

1,3,8,9,16

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Information on the TSCA Inventory (Toxic Substances Control Act) USA:

CAS No	Name	State
110-82-7	cyclohexane	Registered
	hexane, mixture of isomers (containing < 5 % n-hexane (203-777-6))	
141-78-6	ethyl acetate	Registered
78-93-3	butanone,ethyl methyl ketone	Registered
1309-48-4	magnesium oxide	Registered
8050-09-7	Rosin	Registered
1314-13-2	zinc oxide	Registered
50-00-0	formaldehyde	Registered

Risk classification system NFPA 704:

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Health hazard: 1 (Slightly Hazardous)

Flammability: 4 (Below 73°F)

Reactivity: 0 (Stable)

### Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
AwSV: Facility Regulations for handling substances that are hazardous for the water.  
BCF: Bioconcentration factor.  
CEN: European Committee for Standardization.  
DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.  
DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.  
EC50: Half maximal effective concentration.  
PPE: Personal protection equipment.  
IATA: International Air Transport Association.  
ICAO: International Civil Aviation Organization.  
IMDG: International Maritime Code for Dangerous Goods.  
LC50: Lethal concentration, 50%.  
LD50: Lethal dose, 50%.  
Log Pow: Logarithm of the partition octanol-water.  
NOEC: No observed effect concentration.  
PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.  
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.  
WGK: Water hazard classes.

### Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.