

Permabond ET503B

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

 Product name **Permabond ET503B**

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

 Intended use **Adhesive**

Identified Uses	Industrial	Professional	Consumer
Use	✓	✓	-

1.3. Details of the supplier of the safety data sheet

Name	Permabond Engineering Adhesives
Full address	Niederkasseler Lohweg 18
District and Country	40547 Düsseldorf Germany
Tel.	+44 (0)1962 711 661

e-mail address of the competent person responsible for the Safety Data Sheet	info.europe@permabond.com
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Supplier:	Permabond Engineering Adhesives Ltd Wessex Way, Colden Common, Winchester, Hampshire SO21 1WP, UK tel: +44 (0)1962 711 661 mail: info.europe@permabond.com
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1.4. Emergency telephone number

For urgent inquiries refer to	+44 (0)1962 711 661 (8.00 am-5.00 pm Mon-Fri)
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CHEMTREC UK: +(44)-870-8200418
CHEMTREC Ireland: +(353)-19014670
CHEMTREC Australia: +(61)-290372994
CHEMTREC New Zealand: +(64)-98010034

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 2020/878.

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:

Acute toxicity, category 4	H302	Harmful if swallowed.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic to aquatic life with long lasting effects.

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SECTION 2. Hazards identification ... / >>

2.2. Label elements

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

Hazard pictograms:



Signal words: Warning

Hazard statements:
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P310 In case of ingestion: contact an anti -center center or a doctor immediately.
P302+P352 In case of contact with the skin: wash abundantly with soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Contains: 2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate]
 1,4-DIAZABICYCLOOCTANE
 3-MERCAPTOPROPIONIC ACID

2.3. Other hazards

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

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate] INDEX	60 ≤ x < 100	Acute Tox. 4 H302, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1 LD50 Oral: 1000 mg/kg
EC 251-336-1 CAS 33007-83-9 REACH Reg. 01-2120770061-65-XXXX		
1,4-DIAZABICYCLOOCTANE INDEX	1 ≤ x < 3	Flam. Sol. 2 H228, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315 LD50 Oral: 700 mg/kg
EC 205-999-9 CAS 280-57-9 REACH Reg. 01-2119980944-22-XXXX		
3-MERCAPTOPROPIONIC ACID INDEX	0,1 ≤ x < 1	Met. Corr. 1 H290, Acute Tox. 3 H301, Acute Tox. 4 H332, Skin Corr. 1B H314, Eye Dam. 1 H318 STA Oral: 100 mg/kg, STA Inhalation mists/powders: 1,5 mg/l, STA Inhalation vapours: 11 mg/l
EC 203-537-0 CAS 107-96-0 REACH Reg. 01-2119489443-30-XXXX		

Permabond ET503B**SECTION 3. Composition/information on ingredients** ... / >>**2,6-DI-TERT-BUTYL-P-CRESOL**

INDEX 0,25 ≤ x < 1 **Aquatic Chronic 1 H410 M=1**
EC 204-881-4
CAS 128-37-0
REACH Reg. 01-2119480433-40-XXXX

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

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

Skin: Wash the skin thoroughly with soap and water. If symptoms arise, request medical assistance
Eyes: Make sure you have removed any contact lenses before rinsing your eyes. Wash readily and abundantly the eyes with water keeping the eyelids open. Continue to rinse for at least 15 minutes. Consult a doctor if the discomfort continues.
Ingestion: rinse the mouth with water thoroughly. Make a abundant quantity of water drink. Do not cause vomiting. Consult a doctor.
Inhalation: move the subject exposed in the open air. Consult a doctor in case of serious symptoms or persistent.

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

Contact with the skin: skin irritation. Mild dermatitis, allergic rash.
Contact with eyes: irritating and can cause redness and pain.

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

Note for the doctor no specific recommendation. Symptomatic treatment.

SECTION 5. Firefighting measures**5.1. Extinguishing media**

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

5.2. Special hazards arising from the substance or mixture

HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE
Avoid breathing combustion products, carbon monoxide (CO), carbon dioxide (CO₂), and nitric oxides (NO_x).

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.

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SECTION 6. Accidental release measures ... / >>

6.3. Methods and material for containment and cleaning up

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

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. 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 ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Adhesive

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunns skadliga. SOCIAL - OCH HÄLSOVÄRDSMINISTERIETS PUBLIKATIONER 2020:25

SECTION 8. Exposure controls/personal protection ... / >>

2,6-DI-TERT-BUTYL-P-CRESOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	10		40		
TLV	DNK	10		20		
VLA	ESP	10				
VLEP	FRA	10				
HTP	FIN	10		20		

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0002	mg/l
Normal value for fresh water sediment	0,458	mg/kg/d
Normal value for marine water sediment	0,046	mg/kg/d
Normal value for marine water, intermittent release	0,002	mg/l
Normal value of STP microorganisms	0,017	mg/l
Normal value for the food chain (secondary poisoning)	16,67	mg/kg
Normal value for the terrestrial compartment	0,054	mg/kg/d

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	Acute systemic	Chronic local	Chronic systemic
Oral		1 mg/kg bw/d		0,25 mg/kg bw/d				
Inhalation		3,1 mg/m3		0,78 mg/m3	18 mg/m3			4,4 mg/m3
Skin		6,7 mg/kg bw/d		1,7 mg/kg bw/d	19 mg/kg bw/d			4,7 mg/kg bw/d

1,4-DIAZABICYCLOOCTANE

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	Acute systemic	Chronic local	Chronic systemic
Inhalation				1.46 mg/m3				8.24 mg/m3
Skin				0.5 mg/kg bw/d				1.4 mg/kg bw/d

2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate]

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00062	mg/l
Normal value in marine water	0,00006	mg/l
Normal value for fresh water sediment	0,021	mg/kg/d
Normal value for marine water sediment	0,002	mg/kg/d
Normal value for the terrestrial compartment	0,004	mg/kg/d

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	Acute systemic	Chronic local	Chronic systemic
Oral				0.2 mg/kg bw/d				
Inhalation				0.348 mg/m3				1.97 mg/m3
Skin				0.2 mg/kg bw/d				0.56 mg/kg bw/d

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SECTION 8. Exposure controls/personal protection ... / >>

3-MERCAPTOPROPIONIC ACID

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,009	mg/l
Normal value for fresh water sediment	0,007	mg/kg/d
Normal value for marine water sediment	0,001	mg/kg/d
Normal value of STP microorganisms	3,21	mg/l

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	Acute systemic	Chronic local	Chronic systemic
Inhalation								2.08 mg/m3
Skin								0.294 mg/kg bw/d

Legend:

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

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

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.

The following should be considered when choosing work glove material (see standard EN 374): 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 Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

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.

ENVIRONMENTAL EXPOSURE CONTROLS

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

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

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	paste	
Colour	grey	
Odour	characteristic	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	

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SECTION 9. Physical and chemical properties ... / >>

Lower explosive limit	not available
Upper explosive limit	not available
Flash point	> 100 °C
Auto-ignition temperature	not available
Decomposition temperature	not available
pH	not available
Kinematic viscosity	not available
Solubility	not available
Partition coefficient: n-octanol/water	not available
Vapour pressure	not available
Density and/or relative density	1,2
Relative vapour density	not available
Particle characteristics	not applicable

Reason for missing data: substance/mixture is non-soluble (in water)

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

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

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 data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

SECTION 11. Toxicological information ... / >>

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	1267,53 mg/kg
ATE (Dermal) of the mixture:	Not classified (no significant component)

2,6-DI-TERT-BUTYL-P-CRESOL

LD50 (Dermal):	> 2000 mg/kg
LD50 (Oral):	> 2930 mg/kg

1,4-DIAZABICYCLOOCTANE

LD50 (Dermal):	> 2000 mg/kg
LD50 (Oral):	700 mg/kg
LC50 (Inhalation vapours):	> 20 mg/l/1h

2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate]

LD50 (Oral):	1000 mg/kg
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3-MERCAPTOPROPIONIC ACID

STA (Oral):	100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Inhalation mists/powders):	1,5 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

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SECTION 11. Toxicological information ... / >>

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

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

SECTION 12. Ecological information

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

12.1. Toxicity

2,6-DI-TERT-BUTYL-P-CRESOL	
LC50 - for Fish	> 0,57 mg/l/96h
EC50 - for Crustacea	0,61 mg/l/48h
Chronic NOEC for Crustacea	0,316 mg/l

1,4-DIAZABICYCLOOCTANE	
LC50 - for Fish	> 100 mg/l/96h
EC50 - for Crustacea	> 100 mg/l/48h
EC50 - for Algae / Aquatic Plants	180 mg/l/72h

2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate]	
LC50 - for Fish	> 0,624 mg/l/96h
EC50 - for Crustacea	> 0,72 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 0,55 mg/l/72h

12.2. Persistence and degradability

2,6-DI-TERT-BUTYL-P-CRESOL
NOT rapidly degradable

12.3. Bioaccumulative potential

2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate]	
BCF	116

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

Waste class 08 04 09* stickers and sealed sealing, containing organic solvents or other dangerous substances.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 3082

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

14.2. UN proper shipping name

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate] ;
2,6-DI-TERT-BUTYL-P-CRESOL)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate] ;
2,6-DI-TERT-BUTYL-P-CRESOL)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2-Ethyl-2-[(3-mercapto-1-oxopropoxy)methyl]propane-1,3-diyl bis[3-mercaptopropionate] ;
2,6-DI-TERT-BUTYL-P-CRESOL)

14.3. Transport hazard class(es)

ADR / RID: Class: 9 Label: 9



IMDG: Class: 9 Label: 9



IATA: Class: 9 Label: 9



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous



IMDG: Marine Pollutant



IATA: Environmentally Hazardous



Permabond ET503B**SECTION 14. Transport information** ... / >>**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: 90	Limited Quantities: 5 L	Tunnel restriction code: (-)
IMDG:	Special provision: -	Limited Quantities: 5 L	
IATA:	EMS: F-A, S-F	Maximum quantity: 450 L	Packaging instructions: 964
	Cargo:	Maximum quantity: 450 L	Packaging instructions: 964
	Passengers:	A97, A158, A197, A215	
	Special provision:		

14.7. Maritime transport in bulk according to IMO instruments

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/EU: E1

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

Product	
Point	3 - 40

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

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

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 3: Severe hazard to waters

15.2. Chemical safety assessment

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

SECTION 16. Other information

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

Flam. Sol. 2	Flammable solid, category 2
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H228	Flammable solid.

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SECTION 16. Other information ... / >>

H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 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: 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: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term 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) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)

Permabond ET503B**SECTION 16. Other information ... / >>**

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

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

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

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