



**SAFETY DATA SHEET**  
**CrackBond TE (*hardener component*)**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING**

**1.1 Product Identifier**

**Product name** CrackBond TE (*hardener component*)

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

**Identified uses** Two component epoxy based adhesive.

**1.3 Details of the supplier of the safety data sheet**

**Supplier** Helifix  
The Mille  
1000 Great West Road (10<sup>th</sup> Floor)  
Brentford  
London TW8 9DW

Tel: +44 (0)20 8735 5200  
Fax: +44 (0)20 8735 5201  
Email: sales@helifix.co.uk

**Contact person** sales@helifix.co.uk

**1.4 Emergency telephone number**

+44 (0)20 8735 5200 (Mon – Fri 09:00 – 17:00)

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**Classification (EC 1272/2008)**

**Physical hazards** Not Classified

**Health hazards** Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317

**Environmental hazards** Aquatic Chronic 3 - H412

**Human health** Corrosive. Prolonged contact causes serious eye and tissue damage.

**Environmental** The product contains a substance which may have hazardous effects on the environment.

**2.2. Label elements**

**Pictogram**



**Signal word**

Danger



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**Hazard statements**

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P260 Do not breathe vapours.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do not induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P501 Dispose of contents/container in accordance with national regulations.

**Contains**

BENZYL ALCOHOL, REACTION PRODUCTS OF 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE AND 4,4'-ISOPROPYLIDENEDIPHENOL, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE, 1,3-BENZENEDIMETHANAMINE

**Supplementary precautionary statements**

P264 Wash contaminated skin thoroughly after handling.  
P273 Avoid release to the environment.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.

**2.3. Other hazards**

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

<b>BENZYL ALCOHOL</b>	<b>20-50%</b>
<b>CAS number:</b> 100-51-6	<b>EC number:</b> 202-859-9
<b>Classification</b>	<b>REACH registration number:</b> 01-2119492630-38-XXXX
	Acute Tox. 4 - H302
	Acute Tox. 4 - H332
	Eye Irrit. 2 - H319

<b>REACTION PRODUCTS OF 3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE AND 4,4'-ISOPROPYLIDENEDIPHENOL, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE</b>	<b>20-50%</b>
<b>CAS number:</b> —	
<b>Classification</b>	Skin Corr. 1B - H314
	Eye Dam. 1 - H318
	Skin Sens. 1 - H317
	Aquatic Chronic 3 - H412



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<b>1,3-BENZENEDIMETHANAMINE</b>	<b>10-20%</b>	
<b>CAS number:</b> 1477-55-0	<b>EC number:</b> 216-032-5	<b>REACH registration number:</b> 01-2119480150-50-XXXX
<b>Classification</b>	Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Skin Sens. 1B - H317 Aquatic Chronic 3 - H412	

The Full Text for all Hazard Statements are Displayed in Section 16.

**SECTION 4: FIRST AID MEASURES**

**4.1. Description of first aid measures**

<b>Inhalation</b>	Remove affected person from source of contamination. Get medical attention if any discomfort continues.
<b>Ingestion</b>	DO NOT induce vomiting. Get medical attention immediately.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

<b>Inhalation</b>	Irritation of nose, throat and airway.
<b>Ingestion</b>	May cause stomach pain or vomiting.
<b>Skin contact</b>	Burning pain and severe corrosive skin damage. Blistering may occur. Chemical burns.
<b>Eye contact</b>	May cause blurred vision and serious eye damage.

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

<b>Notes for the doctor</b>	No specific recommendations. If in doubt, get medical attention promptly.
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**SECTION 5: FIRE FIGHTING MEASURES**

**5.1. Extinguishing media**

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
<b>Unsuitable extinguishing media</b>	DO NOT use water if avoidable.

**5.2. Special hazards arising from the substance or mixture**

<b>Specific hazards</b>	No unusual fire or explosion hazards noted.
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<b>Hazardous combustion products</b>	Oxides of carbon. Oxides of nitrogen.
<b>5.3. Advice for firefighters</b>	
<b>Protective actions during firefighting</b>	No specific firefighting precautions known
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet.

**6.2. Environmental precautions**

**Environmental precautions** Collect and dispose of spillage as indicated in Section 13. Contain spillage with sand, earth or other suitable non-combustible material. Avoid discharge into drains or watercourses or onto the ground.

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

**Methods for cleaning up** Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

**6.4. Reference to other sections**

**Reference to other sections** For personal protection, see Section 8. Collect and dispose of spillage as indicated in Section 13.

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**SECTION 7: HANDLING AND STORAGE**

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**7.1. Precautions for safe handling**

**Usage precautions** Avoid contact with skin. Avoid contact with eyes. Do not empty into drains.

**Advice on general occupational hygiene**

Do not eat, drink or smoke when using this product. No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

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

**Storage precautions** Keep away from food and drink. Keep container closed when not in use.

**7.3. Specific end use(s)**

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**BENZYL ALCOHOL (CAS: 100-51-6)**

**DNEL** Industry - Inhalation; Long term systemic effects: 90 mg/m<sup>3</sup>  
Industry - Dermal; Long term systemic effects: 9.5 mg/kg/day  
Industry - Dermal; Short term systemic effects: 47 mg/kg/day  
Industry – Inhalation; Short term systemic effects: 450mg/m<sup>3</sup>

**PNEC**

- Fresh water; 1.0 mg/l
- Marine water; 0.1 mg/l
- Sediment (Freshwater); 5.27 mg/kg
- Sediment (Marinewater); 0.57 mg/kg
- Soil; 0.456 mg/kg
- STP; 39 mg/l
- Intermittent release; 2.3 mg/l

**1,3-BENZENEDIMETHANAMINE (CAS: 1477-55-0)**

**PNEC**

- Fresh water; 0.094 mg/l
- Marine water; 0.0094 mg/l
- Intermittent release; 0.152 mg/l
- STP; 10 mg/l
- Sediment (Freshwater); 0.43 mg/kg
- Sediment (Marinewater); 0.043 mg/kg
- Soil; 0.045 mg/kg

**8.2. Exposure controls**

**Protective equipment**



**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection** The following protection should be worn: Tight-fitting safety glasses. Contact lenses should not be worn when working with this chemical.

**Hand protection** Wear protective gloves made of the following material: Nitrile rubber.

**Other skin and body protection** Avoid contact with skin. Wear appropriate clothing to prevent repeated or prolonged skin contact.



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<b>Hygiene measures</b>	Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Use engineering controls to reduce air contamination to permissible exposure level.
<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn.
<b>Environmental exposure Controls</b>	Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

<b>Appearance</b>	Liquid
<b>Colour</b>	Yellowish.
<b>Odour</b>	Characteristic. Amine.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not applicable.
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	>100°C CC (Closed cup). Literature
<b>Evaporation rate</b>	Not determined.
<b>Evaporation factor</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Other flammability</b>	Not applicable.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	~ 1.0
<b>Bulk density</b>	Not available.
<b>Solubility(ies)</b>	Not determined.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.



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<b>Decomposition Temperature.</b>	Not determined
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	No information available.
<b>Explosive under the influence of a flame</b>	Not considered to be explosive
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.

**9.2. Other information**

**SECTION 10: STABILITY AND REACTIVITY**

**10.1. Reactivity**

**Reactivity** The following materials may react with the product: Acids. Epoxides. Oxidising agents. Peroxides.

**10.2. Chemical stability**

**Stability** Stable at normal ambient temperatures and when used as recommended.

**10.3. Possibility of hazardous reactions**

**Possibility of hazardous reactions** The following materials may react with the product: Acids. Epoxides. Oxidising agents. Peroxides.

**10.4. Conditions to avoid**

**Conditions to avoid** Stable. However, may decompose if heated.

**10.5. Incompatible materials**

**Materials to avoid** Acids. Epoxides. Oxidising agents. Peroxides.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** Oxides of carbon. Oxides of nitrogen.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1. Information on toxicological effects**

**Acute toxicity - oral**

**ATE oral (mg/kg)** 1,012.54

**Acute toxicity – inhalation**

**ATE inhalation (vapours mg/l)** 25.88

**ATE inhalation (dusts/mists mg/l)** 8.93

**Skin sensitisation** Sensitising.

**Inhalation** Vapour may irritate respiratory system/lungs.

**Ingestion** May cause stomach pain or vomiting.



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<b>Skin contact</b>	May cause sensitisation by skin contact. May cause serious chemical burns to the skin.
<b>Eye contact</b>	Risk of serious damage to eyes. May cause chemical eye burns.
<b>Acute and chronic health hazards</b>	May cause sensitisation by skin contact. Causes severe burns.
<b>Route of entry</b>	Skin and/or eye contact Inhalation
<b>Target organs</b>	No specific target organs known.
<b>Medical symptoms</b>	Symptoms following overexposure may include the following: Chemical burns.
<b>Medical considerations</b>	Splash in eye requires examination by eye specialist.

**BENZYL ALCOHOL**

<b><u>Acute toxicity - oral</u></b>	
Acute toxicity oral (LD50 mg/kg)	1,040.0
<b>Species</b>	Rabbit
ATE oral (mg/kg)	500.0
<b><u>Acute toxicity - dermal</u></b>	2,000.0
Acute toxicity dermal (LD50 mg/kg)	
<b>Species</b>	Rabbit
<b><u>Acute toxicity - inhalation</u></b>	
ATE inhalation (vapours mg/l)	11.0

**1,3-BENZENEDIMETHANAMINE**

<b><u>Acute toxicity - oral</u></b>	
Acute toxicity oral (LD50 mg/kg)	1,090.0
<b>Species</b>	Rat
ATE oral (mg/kg)	1,090.0
<b><u>Acute toxicity - dermal</u></b>	
Acute toxicity dermal (LD50 mg/kg)	2,000.0
<b>Species</b>	Rat
<b><u>Acute toxicity - inhalation</u></b>	
Acute toxicity inhalation (LC50 dust/mist mg/l)	1.34
<b>Species</b>	Rat
ATE inhalation (dusts/mists mg/l)	1.34





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**SECTION 12: ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**BENZYL ALCOHOL**

**Acute toxicity – fish** LC<sub>50</sub>, 96 hours: 10 mg/l, *Lepomis macrochirus* (Bluegill)  
LC<sub>50</sub>, 96 hours: 645 mg/l, *Leuciscus idus* (Golden orfe)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 400 mg/l, *Daphnia magna*

**Acute toxicity - aquatic Plants** EC<sub>50</sub>, 3 hours: 79 mg/l, *Scenedesmus subspicatus*  
EC<sub>50</sub>, 96 hours: 640 mg/l, *Scenedesmus subspicatus*

**Acute toxicity – microorganisms** EC<sub>50</sub>, 48 hours: 2100 mg/l, Activated sludge

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**Acute toxicity – fish** LL<sub>50</sub>, 96 hours: 70.7 mg/l, *Onchorhynchus mykiss* (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EL<sub>50</sub>, 48 hours: 11.1 mg/l, *Daphnia magna*

**Acute toxicity - aquatic plants** EL<sub>50</sub>, 72 hours: 79.4 mg/l, *Pseudokirchneriella subcapitata*

**Acute toxicity – microorganisms** LC<sub>50</sub>, 3 hours: >1000 mg/l, Activated sludge

**1,3-BENZENEDIMETHANAMINE**

**Acute toxicity – fish** LC<sub>50</sub>, 96 hours: 75 mg/l, *Leuciscus idus* (Golden orfe)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 15.2 mg/l, *Daphnia magna*

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 12 mg/l, *Scenedesmus subspicatus*

**12.2. Persistence and degradability**

**Persistence and degradability** There are no data on the degradability of this product.



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**12.3. Bioaccumulative potential**

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not determined.

**12.4. Mobility in soil**

**Mobility** Mobile. The product is miscible with water and may spread in water systems.

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

**Results of PBT and vPvB Assessment** This product does not contain any substances classified as PBT or vPvB.

**12.6. Other adverse effects**

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

**General information** Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

**Disposal methods** Dispose of waste via a licensed waste disposal contractor.

**SECTION 14: TRANSPORT INFORMATION**

**14.1. UN number**

UN No. (ADR/RID)	2735
UN No. (IMDG)	2735
UN No. (ICAO)	2735
UN No. (ADN)	2735

**14.2. UN proper shipping name**

Proper shipping name (ADR/RID)	AMINES, LIQUID, CORROSIVE, N.O.S.
Proper shipping name (IMDG)	AMINES, LIQUID, CORROSIVE, N.O.S.
Proper shipping name (ICAO)	AMINES, LIQUID, CORROSIVE, N.O.S.
Proper shipping name (ADN)	AMINES, LIQUID, CORROSIVE, N.O.S.

**14.3. Transport hazard class(es)**

ADR/RID class	8
ADR/RID classification code	C7
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

**Transport labels**



**14.4. Packing group**

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II



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ADN packing group

II

**14.5. Environmental hazards**

Environmentally hazardous substance/marine pollutant

No.

**14.6. Special precautions for user**

EmS	F-A, S-B
ADR transport category	2
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

**SECTION 15: REGULATORY INFORMATION**

15.1. Safety, health and environment regulations/legislation specific for the substance or mixture

EU legislation (EU) No 2015/830

Guidance

Workplace Exposure Limits EH40.

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out.

**SECTION 16: OTHER INFORMATION**

Revision date	02/05/2017
Revision	2
SDS number	HUK2

**Hazard statements in full**

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H412 Harmful to aquatic life with long lasting effects.

**Disclaimer**

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.