

## SAFETY DATA SHEET LOKFIX E77 Part A

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

**Product name** LOKFIX E77 Part A

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

**Identified uses** Adhesive mortar for fastening elements. A-Component. For professional use.

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

**Supplier** Fosroc Chemical (India) Pvt. Ltd  
 Embassy Point, No 150, 2nd Floor,  
 Infantry Road,  
 Bangalore - 560001  
 +91 80 2355 1500/ 4252 1900  
 +91 80 2355 1510

#### 1.4. Emergency telephone number

**Emergency telephone** +91 80 2355 1500/ 4252 1900

### SECTION 2: Hazards identification

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

##### Classification (EC 1272/2008)

**Physical hazards** Not Classified

**Health hazards** Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317

**Environmental hazards** Aquatic Chronic 2 - H411

**Human health** May cause skin sensitisation or allergic reactions in sensitive individuals.

#### 2.2. Label elements

##### Hazard pictograms



**Signal word** Warning

**Hazard statements** H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H317 May cause an allergic skin reaction.  
 H411 Toxic to aquatic life with long lasting effects.

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<b>Precautionary statements</b>	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P391 Collect spillage.</p>
<b>Contains</b>	2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE, 1,6 HEXANEDIOL DIGLYCIDYL ETHER
<b>Supplementary precautionary statements</b>	<p>P261 Avoid breathing dust.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE</b>	<b>30-60%</b>
CAS number: 1675-54-3                      EC number: 216-823-5	
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
<b>1,6 HEXANEDIOL DIGLYCIDYL ETHER</b>	<b>10-30%</b>
CAS number: 16096-31-4                      EC number: 240-260-4	
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 3 - H412	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General information</b>	Promptly remove any clothing that becomes contaminated. Get medical advice/attention if you feel unwell.
<b>Inhalation</b>	Move affected person to fresh air at once. If in doubt, get medical attention promptly.
<b>Ingestion</b>	Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention.

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**Skin contact** After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention. Wash contaminated clothing before reuse.

**Eye contact** Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention.

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

**Skin contact** Causes skin irritation. May cause skin sensitisation or allergic reactions in sensitive individuals.

**Eye contact** Causes serious eye irritation.

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

**Notes for the doctor** Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Extinguish with foam, carbon dioxide, dry powder or water fog.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

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

**Hazardous combustion products** Toxic pyrolysis products Carbon monoxide (CO).

### 5.3. Advice for firefighters

**Protective actions during firefighting** In case of fire and/or explosion do not breathe fumes. Use water spray to reduce vapours. Avoid the spillage or runoff entering drains, sewers or watercourses.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## SECTION 6: Accidental release measures

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

**Personal precautions** Wear protective gloves, eye and face protection. Avoid contact with skin, eyes and clothing. Provide adequate ventilation.

### 6.2. Environmental precautions

**Environmental precautions** Avoid release to the environment. Avoid the spillage or runoff entering drains, sewers or watercourses.

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

**Methods for cleaning up** Collect spillage. Absorb in vermiculite, dry sand or earth and place into containers. For waste disposal, see Section 13.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** For professional users only. Use only outdoors or in a well-ventilated area. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.

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

**Storage precautions** Keep only in the original container in a cool, well-ventilated place. Container must be kept tightly closed when not in use. Avoid contact with oxidising agents. Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

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

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

**Additional advice on limit values** This mixture contains quartz filler which is firmly bound in the pasty component, and thus not freely available during use, so that a risk of dust inhalation is excluded. Exposure limit values for respirable dusts are not relevant for this product.

#### 2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

**DNEL**

Workers - Dermal; Short term systemic effects: 8.33 mg/kg/day  
 Workers - Inhalation; Short term systemic effects: 12.25 mg/kg/day  
 Workers - Dermal; Long term systemic effects: 8.33 mg/kg/day  
 Workers - Inhalation; Long term systemic effects: 12.25 mg/kg/day  
 Consumer - Dermal; Short term systemic effects: 3.571 mg/kg/day  
 Consumer - Oral; Short term systemic effects: 0.75 mg/kg/day  
 Consumer - Dermal; Long term systemic effects: 3.571 mg/kg/day  
 Consumer - Oral; Long term systemic effects: 0.75 mg/kg/day

#### 1,6 HEXANEDIOL DIGLYCIDYL ETHER (CAS: 16096-31-4)

**DNEL**

Workers - Inhalation; Long term systemic effects: 10.57 mg/m<sup>3</sup>  
 Workers - Inhalation; Long term local effects: 0.44 mg/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 6.0 mg/kg/day  
 Workers - Dermal; Long term local effects: 0.0226 mg/cm<sup>2</sup>

**PNEC**

Fresh water; 0.0115 mg/l  
 marine water; 0.00115 mg/l  
 Sediment (Freshwater); 0.283 mg/kg  
 Sediment (Marinewater); 0.283 mg/kg

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation. Mechanical ventilation or local exhaust ventilation may be required.

#### Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

#### Hand protection

To protect hands from chemicals, gloves should comply with European Standard EN374. It is recommended that gloves are made of the following material: Nitrile rubber. Thickness: > 0.7 mm The selected gloves should have a breakthrough time of at least 8 hours.

#### Other skin and body protection

Wear protective clothing.

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<b>Hygiene measures</b>	Take off contaminated clothing and wash it before reuse. Wash contaminated skin thoroughly after handling. Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2.

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Solid. Paste.
<b>Colour</b>	Beige.
<b>Odour</b>	Characteristic.
<b>pH</b>	Not determined.
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Vapour pressure</b>	Not determined.
<b>Relative density</b>	1.45 @ 20°C
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.

#### 9.2. Other information

<b>Other information</b>	No data available.
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	See Section 10.3 (Possibility of hazardous reactions) for further information.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	The following materials may react violently with the product: Strong oxidising agents.
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#### 10.4. Conditions to avoid

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**Conditions to avoid** Avoid heat. Avoid exposure to high temperatures or direct sunlight.

### 10.5. Incompatible materials

**Materials to avoid** Oxidising agents.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** No known hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

**Skin corrosion/irritation** Causes skin irritation.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye irritation.

#### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation** May cause an allergic skin reaction.

#### Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

#### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

#### Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

#### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

### Toxicological information on ingredients.

#### 1,6 HEXANEDIOL DIGLYCIDYL ETHER

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 2,190.0

**Species** Rat

**ATE oral (mg/kg)** 2,190.0

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> >2000 mg/kg, Dermal, Rat

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### Acute toxicity - inhalation

**Acute toxicity inhalation** 0.035  
(LC<sub>50</sub> vapours mg/l)

**Species** Rat

## SECTION 12: Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

### Ecological information on ingredients.

#### 2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

### 12.1. Toxicity

#### Ecological information on ingredients.

#### 2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

**Toxicity** Very toxic to aquatic life with long lasting effects.

#### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 2 mg/l, Oncorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 1.8 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** ErC50, 72 hours: 11 mg/l, Scenedesmus capricornutum (fresh water algae)

#### Chronic aquatic toxicity

**Chronic toxicity - aquatic invertebrates** NOEC, 21 days: 0.3 mg/l, Daphnia magna

#### 1,6 HEXANEDIOL DIGLYCIDYL ETHER

#### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 30 mg/l, Oncorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 47 mg/l, Daphnia magna

### 12.2. Persistence and degradability

**Persistence and degradability** The product contains persistent (not readily degradable) substances. The other substances in the product are expected to be readily biodegradable.

#### Ecological information on ingredients.

#### 2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

**Persistence and degradability** The product is not readily biodegradable.

**Biodegradation** - Degradation 12%: 28 days  
OECD 302B

#### 1,6 HEXANEDIOL DIGLYCIDYL ETHER

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**Biodegradation** - 71%: 28 days  
OECD 301D

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** Not determined.

**Partition coefficient** Not determined.

### Ecological information on ingredients.

#### 2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

**Bioaccumulative potential** Potentially bioaccumulating.

**Partition coefficient** log Pow: 3.24 Estimated value

#### 1,6 HEXANEDIOL DIGLYCIDYL ETHER

**Bioaccumulative potential** BCF: 3.57,

**Partition coefficient** log Pow: 0.822

### 12.4. Mobility in soil

**Mobility** Insoluble in water.

### Ecological information on ingredients.

#### 2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

**Mobility** Low mobility.

**Adsorption/desorption coefficient** - Koc: Estimated value. 1800 - 4400 @ 20°C

### 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.

### Ecological information on ingredients.

#### 2,2'-[1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

### 12.6. Other adverse effects

**Other adverse effects** None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Dispose of waste product or used containers in accordance with local regulations

**Waste class** 080409  
150110

## SECTION 14: Transport information

### 14.1. UN number

**UN No. (ADR/RID)** 3077



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UN No. (IMDG)	3077
UN No. (ICAO)	3077
UN No. (ADN)	3077

### 14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (EPOXY RESIN)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (EPOXY RESIN)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (EPOXY RESIN)
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (EPOXY RESIN)

### 14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID classification code	M7
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

#### Transport labels



### 14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

EmS	F-A, S-F
ADR transport category	3
Emergency Action Code	2Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(-)

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

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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

### SECTION 15: Regulatory information

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

**EU legislation**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 453/2010 of 20 May 2010.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

**Abbreviations and acronyms used in the safety data sheet**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ATE: Acute Toxicity Estimate.

BCF: Bioconcentration Factor.

CAS: Chemical Abstracts Service.

DNEL: Derived No Effect Level.

EC<sub>50</sub>: 50% of maximal Effective Concentration.

ErC50: the concentration of test substance which results in a 50% reduction in growth rate relative to the control.

ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.

LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).

NOEC: No Observed Effect Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No Effect Concentration.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

STP: Sewage treatment plant

vPvB: Very Persistent and Very Bioaccumulative.

**Revision comments** This is the first issue.

**Revision date** 25/08/2021

**Revision** 0

**SDS number** 29984

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### **Hazard statements in full**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

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.

## SAFETY DATA SHEET LOKFIX E77 Part B

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

**Product name** LOKFIX E77 Part B

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

**Identified uses** Adhesive mortar for fastening elements. B-Component. For professional use.

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

**Supplier** Fosroc Chemical (India) Pvt. Ltd  
 Embassy Point, No 150, 2nd Floor,  
 Infantry Road,  
 Bangalore - 560001  
 +91 80 2355 1500/ 4252 1900  
 +91 80 2355 1510

#### 1.4. Emergency telephone number

**Emergency telephone** +91 80 2355 1500/ 4252 1900

### 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** May cause sensitisation or allergic reactions in sensitive individuals.

#### 2.2. Label elements

##### Hazard pictograms



**Signal word** Danger

**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.

## LOKFIX E77 Part B

<b>Precautionary statements</b>	<p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
<b>Contains</b>	<p>2,2,4(or 2,4,4)-TRIMETHYLHEXANE-1,6-DIAMINE, 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL, m-PHENYLENEBIS( METHYLAMINE)</p>
<b>Supplementary precautionary statements</b>	<p>P260 Do not breathe dust.</p> <p>P261 Avoid breathing dust.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p>

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<b>2,2,4(or 2,4,4)-TRIMETHYLHEXANE-1,6-DIAMINE</b>	<b>30-60%</b>
CAS number: 25620-58-0	EC number: 247-134-8
	REACH registration number: 01-2119560598-25-XXXX
<b>Classification</b>	
Acute Tox. 4 - H302	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
Aquatic Chronic 3 - H412	
<b>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL</b>	<b>5-10%</b>
CAS number: 90-72-2	EC number: 202-013-9
	REACH registration number: 01-2119560597-27-XXXX
<b>Classification</b>	
Acute Tox. 4 - H302	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	

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

  

<b>p-TOLUENESULPHONIC ACID</b>	<b>1-5%</b>
CAS number: 104-15-4	EC number: 203-180-0
	REACH registration number: 01-2119538811-39-XXXX
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
STOT SE 3 - H335	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	Promptly remove any clothing that becomes contaminated. Get medical advice/attention if you feel unwell.
<b>Inhalation</b>	Move affected person to fresh air at once. If in doubt, get medical attention promptly.
<b>Ingestion</b>	Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention.
<b>Skin contact</b>	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention.

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

<b>Ingestion</b>	Harmful if swallowed.
<b>Skin contact</b>	Causes severe burns. May cause skin sensitisation or allergic reactions in sensitive individuals.
<b>Eye contact</b>	Causes serious eye damage.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

## LOKFIX E77 Part B

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

**Hazardous combustion products** Toxic pyrolysis products Carbon monoxide (CO).

### 5.3. Advice for firefighters

**Protective actions during firefighting** In case of fire and/or explosion do not breathe fumes. Use water spray to reduce vapours. Avoid the spillage or runoff entering drains, sewers or watercourses.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## SECTION 6: Accidental release measures

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

**Personal precautions** Wear protective gloves, eye and face protection. Avoid contact with skin, eyes and clothing. Provide adequate ventilation.

### 6.2. Environmental precautions

**Environmental precautions** Avoid release to the environment. Avoid the spillage or runoff entering drains, sewers or watercourses.

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

**Methods for cleaning up** Collect spillage. Absorb in vermiculite, dry sand or earth and place into containers. For waste disposal, see Section 13.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** For professional users only. Use only outdoors or in a well-ventilated area. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.

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

**Storage precautions** Keep only in the original container in a cool, well-ventilated place. Container must be kept tightly closed when not in use. Avoid contact with oxidising agents. Keep away from food, drink and animal feeding stuffs. Store at temperatures between 5°C and 35°C.

### 7.3. Specific end use(s)

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

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

**Additional advice on limit values** This mixture contains quartz filler which is firmly bound in the pasty component, and thus not freely available during use, so that a risk of dust inhalation is excluded. Exposure limit values for respirable dusts are not relevant for this product.

2,2,4(or 2,4,4)-TRIMETHYLHEXANE-1,6-DIAMINE (CAS: 25620-58-0)

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<b>PNEC</b>	Fresh water; 0.102 mg/l marine water; 0.01 mg/l Sediment (Freshwater); 0.662 mg/kg Sediment (Marinewater); 0.062 mg/kg STP; 72 mg/l
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### 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL (CAS: 90-72-2)

<b>PNEC</b>	Fresh water; 0.084 mg/l marine water; 0.0084 mg/l STP; 0.2 mg/l
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### m-PHENYLENEBIS( METHYLAMINE) (CAS: 1477-55-0)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 1.2 mg/m <sup>3</sup> Workers - Inhalation; Long term local effects: 0.2 mg/m <sup>3</sup> Workers - Dermal; Long term systemic effects: 0.33 mg/kg/day
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<b>PNEC</b>	Fresh water; 0.094 mg/l marine water; 0.009 mg/l Sediment (Freshwater); 0.43 mg/kg Sediment (Marinewater); 0.043 mg/kg STP; 10 mg/l Soil; 0.045 mg/kg
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### p-TOLUENESULPHONIC ACID (CAS: 104-15-4)

<b>DNEL</b>	Workers - Dermal; Long term systemic effects: 7.6 mg/kg/day Workers - Inhalation; Long term systemic effects: 53.6 mg/m <sup>3</sup>
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<b>PNEC</b>	Fresh water; 0.073 mg/l marine water; 0.0073 mg/l Sediment (Freshwater); 0.0577 mg/kg Sediment (Marinewater); 0.00577 mg/kg Soil; 0.016 mg/kg
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## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate ventilation. Mechanical ventilation or local exhaust ventilation may be required.

### Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

### Hand protection

To protect hands from chemicals, gloves should comply with European Standard EN374. It is recommended that gloves are made of the following material: Nitrile rubber. Thickness: > 0.7 mm The selected gloves should have a breakthrough time of at least 8 hours.

### Other skin and body protection

Wear protective clothing.

### Hygiene measures

Take off contaminated clothing and wash it before reuse. Wash contaminated skin thoroughly after handling. Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.



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**Respiratory protection** If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2.

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Solid. Paste.
<b>Colour</b>	Grey. Red.
<b>Odour</b>	Characteristic.
<b>pH</b>	Not determined.
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Vapour pressure</b>	Not determined.
<b>Relative density</b>	1.42 @ 20°C
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising.

#### 9.2. Other information

<b>Other information</b>	No data available.
<b>Volatile organic compound</b>	This product contains a maximum VOC content of 21.7 %.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	See Section 10.3 (Possibility of hazardous reactions) for further information.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	The following materials may react violently with the product: Oxidising agents.
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#### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Avoid heat.
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#### 10.5. Incompatible materials

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**Materials to avoid** Strong oxidising agents. Organic peroxides/hydroperoxides.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** No known hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** Based on available data the classification criteria are not met.

#### Acute toxicity - oral

**ATE oral (mg/kg)** 914.08

#### Acute toxicity - inhalation

**ATE inhalation (vapours mg/l)** 111.11

#### Skin corrosion/irritation

**Skin corrosion/irritation** Causes severe burns.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye damage.

#### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation** May cause an allergic skin reaction.

#### Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

#### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

#### Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

#### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

### Toxicological information on ingredients.

#### 2,2,4(or 2,4,4)-TRIMETHYLHEXANE-1,6-DIAMINE

##### Acute toxicity - oral

**ATE oral (mg/kg)** 500.0

#### 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> 2169 mg/kg, Oral, Rat

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<b>ATE oral (mg/kg)</b>	500.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Notes (dermal LD<sub>50</sub>)</b>	LD <sub>50</sub> 1280 mg/kg, Dermal, Rat
<b><u>m-PHENYLENEBIS( METHYLAMINE)</u></b>	
<b><u>Acute toxicity - oral</u></b>	
<b>Notes (oral LD<sub>50</sub>)</b>	LD <sub>50</sub> 930 mg/kg, Oral, Rat
<b>ATE oral (mg/kg)</b>	500.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Notes (dermal LD<sub>50</sub>)</b>	LD <sub>50</sub> >3100 mg/kg, Dermal, Rabbit
<b><u>Acute toxicity - inhalation</u></b>	
<b>Notes (inhalation LC<sub>50</sub>)</b>	LC <sub>50</sub> 1.34 mg/l, Inhalative, (Mist), Rat (OECD 403)
<b>ATE inhalation (vapours mg/l)</b>	11.0

### SECTION 12: Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

#### 12.1. Toxicity

##### Ecological information on ingredients.

#### 2,2,4(or 2,4,4)-TRIMETHYLHEXANE-1,6-DIAMINE

<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	NOEC, 30 days: 10.9 mg/l, Brachydanio rerio (Zebra Fish)
<b>Acute toxicity - aquatic invertebrates</b>	NOEC, 21 days: 1.02 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	ErC <sub>50</sub> , 72 hours: 43.5 mg/l, Selenastrum capricornutum

#### 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 175 mg/l, Cyprinus carpio (Common carp)
<b>Acute toxicity - aquatic plants</b>	ErC <sub>50</sub> , 72 hours: 84 mg/l, Desmodemus subspicatus

#### m-PHENYLENEBIS( METHYLAMINE)

<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 87.6 mg/l, Oryzias latipes (Red killifish)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours: 15.2 mg/l, Daphnia magna NOEC, 21 days: 4.7 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	ErC <sub>50</sub> , 72 hours: 32.1 mg/l, Selenastrum capricornutum

#### 12.2. Persistence and degradability

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**Persistence and degradability** No data available.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** Not determined.

**Partition coefficient** Not determined.

### Ecological information on ingredients.

#### 2,2,4(or 2,4,4)-TRIMETHYLHEXANE-1,6-DIAMINE

**Partition coefficient** log Pow: -0.3

#### 2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

**Partition coefficient** log Pow: 0.219

#### m-PHENYLENEBIS( METHYLAMINE)

**Bioaccumulative potential** BCF: 2.69,

**Partition coefficient** log Pow: 0.18

#### p-TOLUENESULPHONIC ACID

**Partition coefficient** log Pow: 0.93

### 12.4. Mobility in soil

**Mobility** Insoluble in water.

### 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

**Other adverse effects** None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Dispose of waste product or used containers in accordance with local regulations

**Waste class** 080409  
150110

## SECTION 14: Transport information

### 14.1. UN number

**UN No. (ADR/RID)** 3259

**UN No. (IMDG)** 3259

**UN No. (ICAO)** 3259

**UN No. (ADN)** 3259

### 14.2. UN proper shipping name

**Proper shipping name (ADR/RID)** AMINES, SOLID, CORROSIVE, N.O.S. (2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine, m-Phenylenebis( methylamine))

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**Proper shipping name (IMDG)** AMINES, SOLID, CORROSIVE, N.O.S. (2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine, m-Phenylenebis( methylamine))

**Proper shipping name (ICAO)** AMINES, SOLID, CORROSIVE, N.O.S. (2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine, m-Phenylenebis( methylamine))

**Proper shipping name (ADN)** AMINES, SOLID, CORROSIVE, N.O.S. (2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine, m-Phenylenebis( methylamine))

### 14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C8
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
ADN packing group	II

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**  
No.

### 14.6. Special precautions for user

IMDG Code segregation group	18. Alkalis
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 MARPOL and the IBC Code

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**SECTION 15: Regulatory information**

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

<b>National regulations</b>	The Manufacture, storage and import of hazardous chemicals rules 1989.
<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 453/2010 of 20 May 2010.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. ATE: Acute Toxicity Estimate. BCF: Bioconcentration Factor. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. EC <sub>50</sub> : 50% of maximal Effective Concentration. ErC50: the concentration of test substance which results in a 50% reduction in growth rate relative to the control. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. LC <sub>50</sub> : Lethal Concentration to 50 % of a test population. LD <sub>50</sub> : Lethal Dose to 50% of a test population (Median Lethal Dose). NOEC: No Observed Effect Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. STP: Sewage treatment plant vPvB: Very Persistent and Very Bioaccumulative.
<b>Revision comments</b>	This is the first issue.
<b>Revision date</b>	25/08/2021
<b>Revision</b>	0
<b>SDS number</b>	29985

## LOKFIX E77 Part B

### Hazard statements in full

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

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.