

Operation and Maintenance Manual

Somerlea

Project details

Langley Design Project Reference No.	LDINV3758
Client Project Reference / Order Number	PO-02488/Z49/FD
Revision	01
Issue Date	16 th March 2026

Index

1. Manuals

- 1.1 Scope of Works
- 1.2 Sub-Contractor Details
- 1.3 Guarantees and Warranties
- 1.4 Test Certificates
- 1.5 Maintenance and Cleaning
- 1.6 Operating and Fault Finding Routines
- 1.7 Safety Procedures
- 1.8 Modification / Disposal

2. Spares/Tools

- 2.1 Spare Parts
- 2.2 Tools

3. C.O.S.H.H. Reports

- 3.1 Data Sheets

4. Drawings

- 4.1 Drawings

Attached Documents

- Test Certificates
- Drawings
- C.O.S.H.H. Sheets

1. Manuals

1.1 Scope of Works

Supply, deliver and install the following external furniture as follows:

Item	Product Code	Fixing Opt.	Material	Finish	Guttering	Roofing	Description	Qty
A	SBS302-VE	C	TRC4	GL	None	n/a	Bin Store	1

Key Codes

FIXING OPTION

Direct Embedment/Root Fix	A
Below Finished Grade Base Fix	B
Surface Mount	C
Plinth Mount - Grey Granite	D-GG
Free Standing	FS
Free Standing with Base Weight	FS-BW
Wall Mount	WM

ROOFING

R32 Metal Roofing	R32
Poly Roofing	POLY
Non-Fragile Coloured Roofing	NF
Sedum	SEDUM

SLAT MATERIAL

Treated Redwood Class 3 Unstained	TRC3
Treated Redwood Class 4 Unstained	TRC4
Stained Dark Oak	DO
Cumaru	CU
Treated Softwood Unstained	TS
Douglas Fir	DF
FSC Hardwood Iroko	HI
Recycled Plastic - Black	RP-BK
Recycled Plastic - Grey	RP-GY
Recycled Plastic - Green	RP-GN
Recycled Plastic - Brown	RP-BR

METAL FINISH

Galvanised	GL
Galvanised and Powder Coated	GPC
Stainless Steel	SS-304/316

GUTTERING

None	N/A
Galvanized Half Round	GALV HR
Black Plastic Half Round	BLACK HR

TOP TYPE

Apex Top	AT
Chamfer Top	CT
Dome Top	DT
Flat Top	FT
Slant Top	ST

CONCRETE COLOUR

Concrete Colour - Light Grey	LG
Concrete Colour - White	WT
Concrete Colour - Buff	BF
Concrete Colour - Black	BK
Concrete Colour - Red	RD
Concrete Colour - Standard Grey	SG
Concrete Colour - Non Standard	NS

FINISH

Concrete Finish - Acid Etched Finish	AEF
Concrete Finish - Deluxe Polish (top)	DP
Concrete Finish - Exposed Aggregate	EA

1.2 Sub-Contractor details

Langley Marketing Limited t/a Langley Design

Address: Unit L (Gate 1)
Chelworth Industrial Estate
Cricklade
Swindon
Wiltshire
SN6 6HE

Phone: +44 (0)1793 759461

Email: info@langleydesign.co.uk

Website: www.langleydesign.co.uk

Contact: Liam Shaw

Position: Managing Director

1.3 Guarantees and Warranties

Quality of Goods *(Section 5 extract from Doc8.1-1 Rev2 General Conditions of Sale)*

5.1 The Supplier warrants that on delivery, and for a period of 36 months from the date of delivery (warranty period), the Goods shall:

- conform with the Goods Specification;
- be free from material defects in design, material, and workmanship; and
- be of satisfactory quality (within the meaning of the Sale of Goods Act 1979); and
- be fit for any purpose held out by the Supplier.

5.2 All foundations or slabs are cast by third parties.

5.3 Subject to clause 5.4, the Supplier shall, at its option, repair or replace the defective Goods, or refund the price of the defective Goods in full if:

- the Customer gives notice in writing during the warranty period within a reasonable time of discovery that some or all of the Goods do not comply with the warranty set out in clause 0;
- the Supplier is given a reasonable opportunity of examining such Goods; and
- the Customer (if asked to do so by the Supplier) returns such Goods to the Supplier's place of business at the Supplier's cost.

5.4 The Supplier shall not be liable for the Goods' failure to comply with the warranty in clause 0 if:

- the Customer makes any further use of such Goods after giving a notice in accordance with clause 0;
- the defect arises because the Customer failed to follow the Supplier's oral or written instructions as to the storage, installation, commissioning, use or maintenance of the Goods or (if there are none) good trade practice;
- the defect arises as a result of the Supplier following any drawing, design or Goods Specification supplied by the Customer;
- the Customer alters or repairs such Goods without the written consent of the Supplier;
- the defect arises as a result of fair wear and tear, wilful damage, negligence, or abnormal working conditions;

the defect arises as a result of the Customer not installing the Goods immediately after delivery in accordance with clause 4.12; or

the Goods differ from the Goods Specification as a result of changes made to ensure they comply with applicable statutory or regulatory standards.

5.5 Except as provided in this clause, the Supplier shall have no liability to the Customer in respect of the Goods' failure to comply with the warranty set out in clause 0.

5.6 The terms of these Conditions shall apply to any repaired or replacement Goods supplied by the Supplier.

Galvanised Products

Galvanised products are processed to meet BS EN ISO 1461 with a mean average coating of 70 Microns. Corrosion rates can be determined from the Zinc Millennium Map (see www.hdg.org.uk).

1.4 Test Certificates

- a) Wood treatment certificate – Certificate Number TC020329

1.5 Maintenance and Cleaning

The equipment supplied has been designed to need minimal maintenance.

Metalwork

All metalwork should be cleaned annually to remove any build-up of dirt. This can usually be achieved using a mild detergent and then rinsing with clean water. Damaged areas of galvanising should be treated with an anti-rust zinc based product in line with its instructions. Damaged paint finishes should be touched up with a suitable colour match touch-up paint product.

Woodwork

All timber has been pressure treated with "BASF Wolmanit CX-8F". UC4 timber is treated in accordance with BS 8417 and WPA Code of Practice – Industrial Wood Preservative to a 15-Year Desired Service Life. Timber will naturally fade with exposure to the elements and often become 'silver grey'. Timber is a natural material and some "shakes" (cracks) or slight grain lifting will inevitably occur, these will be more pronounced in dry periods.

If required shakes can be filled and lifting grain can be glued however this does not eradicate the likelihood of reoccurrence to other areas of the timber. Normal shakes do not affect the structural properties of the timber however if in doubt guidance can be obtained from Langley Design and TRADA. Under no circumstances should the timber be pressure washed as this will degrade the timber.

1.6 Operating and Fault Finding

Regular visual inspections should be carried out to identify any faults.

Inspections should include checks for –

- Any damage or vandalism to the product
- The condition of the timber slats
- All the screws and fixings
- The bond of any tops to plinths

Note. When checking the bond of the tables and benches to their plinths. Product should be checked at least annually and re-bonded if required using a suitable Resin, these products are supplied and are assembled on site with Epoxy-Acrylate Resin for installation. This is the product that should be used if required.

1.7 Safety Procedures

Health and Safety

Any works carried out should first be assessed against the Health and Safety at Work Act 1974 and all corresponding legislation, Regulations and ACOPS including the CDM regulations 2015 should also be considered. Risk assessments and Method Statements should be carried out for any works.

COSHH

When working with hazardous substances, the relevant COSHH regulation sheet for materials handling should be adhered to.

1.8 Modification / Disposal

Care should be taken when dismantling any product for disposal / modification.

A risk assessment should be carried out at the time as required by the health and Safety at Work act. Considerations should be taken into account for Manual Handling / slips trips and falls / working at height / Safe Handling of material / PPE / use of any electrical equipment (this list is extensive but not exhaustive). consideration should also be considered for personnel around the area.

All works should be carried out with consideration to all the latest legislation, regulations and ACoP's at the time of works.

There are no items of danger and all items can be disposed of in landfill. Langley Design would recommend recycling / re-using as much material as possible and for environmental reasons, landfill should be a last resort. A waste carriers license should be obtained if carrying the material on the public highway for disposal.

Modifications should not be carried out without approval from Langley Design. This may affect the structural integrity of the units on site. If modifications are required, please contact Langley Design for advice.

Risk assessments should be carried out at the time of work to assess the actual risk at the time. Advice can be given at the time if required.

2. Spares

2.1 Spare Parts

Spare parts are available for all items that have been supplied by Langley Design. To order parts please contact Langley Design

Tel: 01793 759461

E-Mail: info@langleydesign.co.uk

2.2 Special Tools

Benches/seats – not applicable

Litter containers – not applicable

Picnic tables – not applicable

Plinth mount product – two-part resin gun

Malford shelters – spanners or sockets for M10 and M12

Sheldon shelters – spanners or sockets for M10 and M16

3. C.O.S.H.H. Reports

3.1 Data Sheets

- RAWL R-KER Hybrid Resin – Safety Data Sheet
- BASF Wolmanit CX-8F (treated timber) – Safety Data Sheet

4. Drawings

4.1 Drawings

 LDINV-3758-10-100 Rev2

The following pages contain the attached documents:

- Test/Treatment Certificates
- Drawings
- C.O.S.H.H. Sheets



GLENAVON
QUALITY INGRAINED
PRESSURE TREATMENTS

Tel: 0117 9861142
Fax: 0117 9111448
Company Number: 11103540
VAT Reg Number: 325 467 202

Glenavon Timber Services LTD
Ashmead Road, Keynsham, Bristol, BS31 1SX
info@glenavontimberservices.co.uk
www.glenavontimberservices.co.uk

TREATMENT CERTIFICATE FOR PRESSURE TREATED WOOD

ISSUED TO:

Sydenhams Timber Centre
Chelworth Park
Cricklade
Swindon
SN1G 6UE

Certificate Number: TC020329

Your Order No: 81M02094
Charge Number: 22536/38
Date: 07/01/2026

DETAILS OF TREATMENT

Treatment Specification / Schedule / Use Class: **Pressure - HC4**
HC4: External, in ground or fresh water contact eg: fence posts and garden timbers.

Solution Strength: 2.4%

Retention: **3.08kg/m3**

Treatment

Date	Charge No	Pack Number	MC%	Timber Species	Timber Sizes	Timber Quantity (m3)
01/2026	22536/38	10	20 / 30	Redwood	As Order	26.585

IMPORTANT INFORMATION.

Do not burn preserved wood.
Wear a dust mask and goggles when cutting or sanding wood.
Wear gloves when working with wood.
The preservative may migrate from the treated wood into soil/water or may dislodge from the treated wood surface upon contact with skin. Wash exposed skin areas thoroughly.
All sawdust and construction debris should be cleaned up and disposed of after construction.
Wash work clothes separately from other household clothing before re-use.
Preserved wood should not be used where it may come into direct contact or indirect contact with drinking water except for uses involving incidental contact such as fresh water docks and bridges.
Do not use preserved wood under circumstances where the preservative may become a component of food animal feed or beehives.
Do not use preserved wood for mulch.
Only preserved wood that is visibly clean and free of surface residue should be used.
Do not use preserved wood in direct contact with aluminium.
If wood is to be used in an interior application and becomes wet during construction it should be allowed to dry before being covered or enclosed.
Disposal Recommendations: Preserved wood may be disposed of in landfills or burned in commercial or industrial incinerators or boilers in accordance with National and Regional regulations.
If you desire to apply a paint stain clear water repellent or other finish to your preservative treated wood we recommend following small test area before finishing the entire project to ensure it provides the intended result before proceeding.
Certain metal products (inc fastener hardware and flashing) may corrode when in direct contact with wood treated with copper based preservatives. To prevent premature corrosion and failure it is important to follow the recommendations of the manufacturer for all metal products.
Mould growth can and does occur on the surface of many products including treated or untreated wood during prolonged surface exposure to excessive moisture conditions. To remove mould from treated wood surfaces wood should be allowed to dry. Typically mild soap and water can be used to remove surface mould.

COSHH - CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 2002

Once fully dry preserved wood may be regarded as untreated for COSHH purposes.

Literature will be updated when the need arises, please ensure you have an up to date copy.

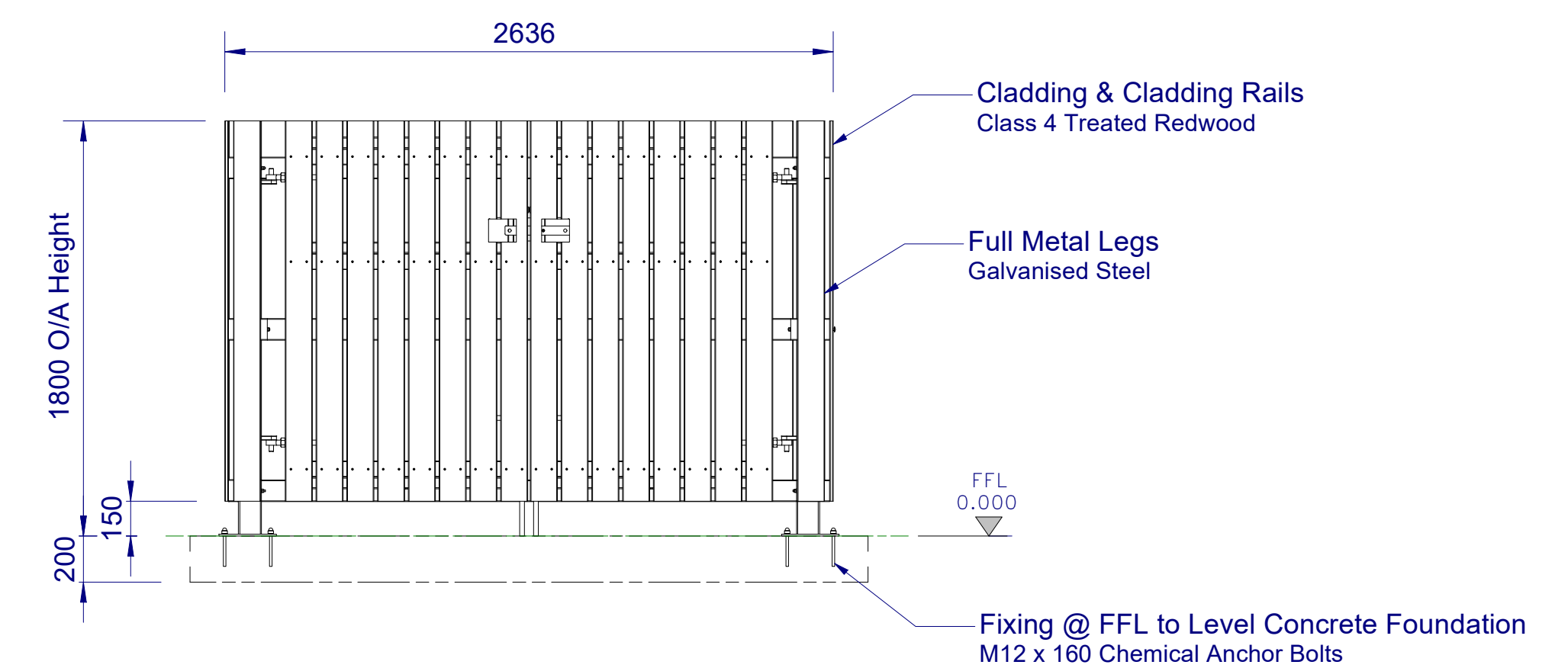
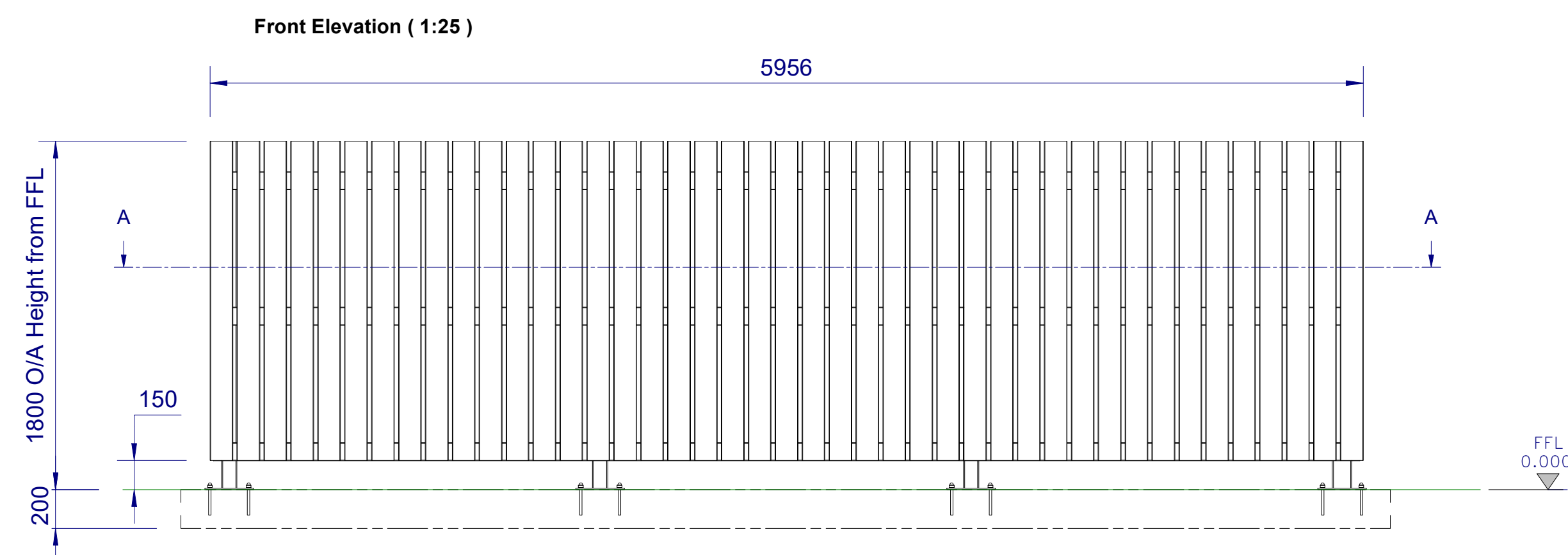
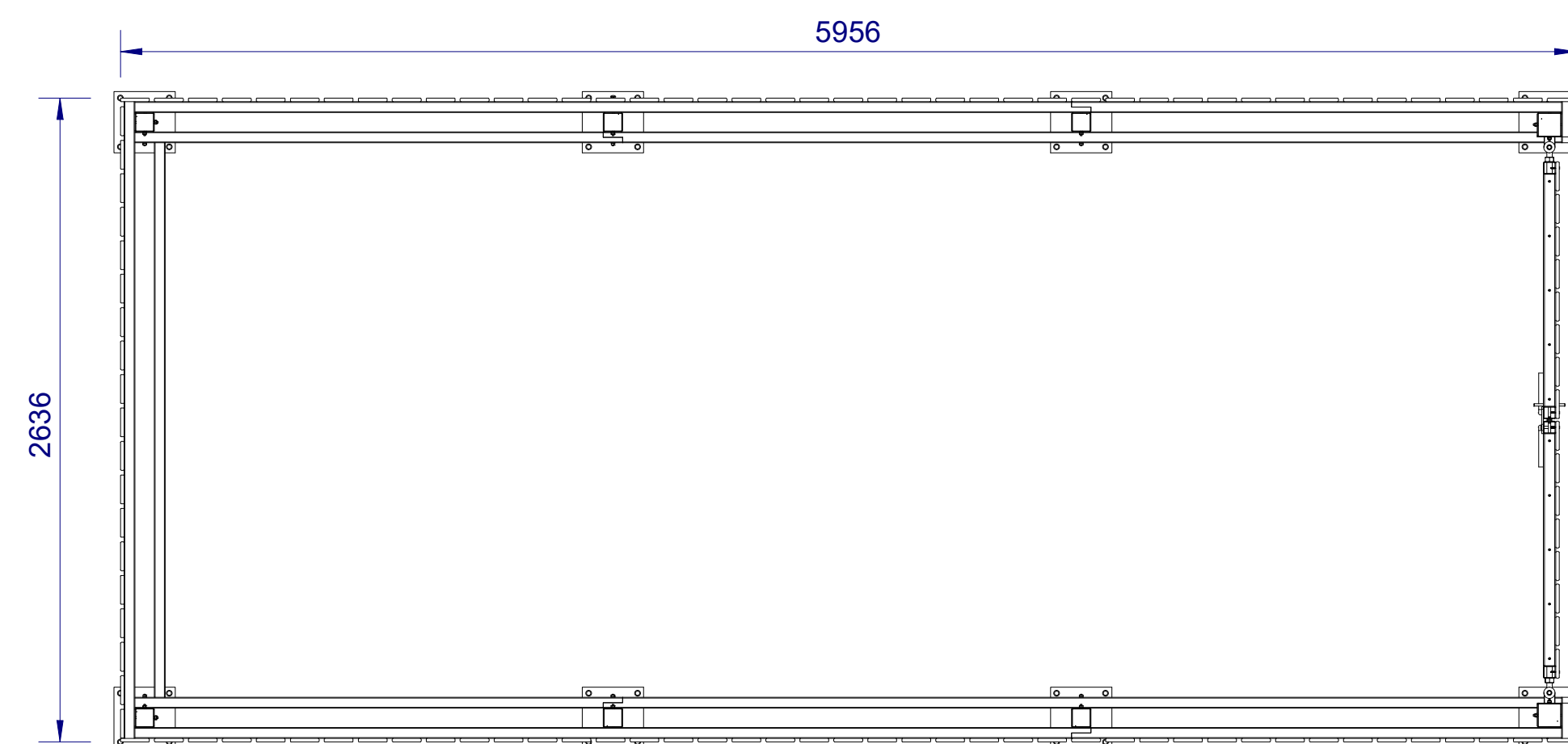
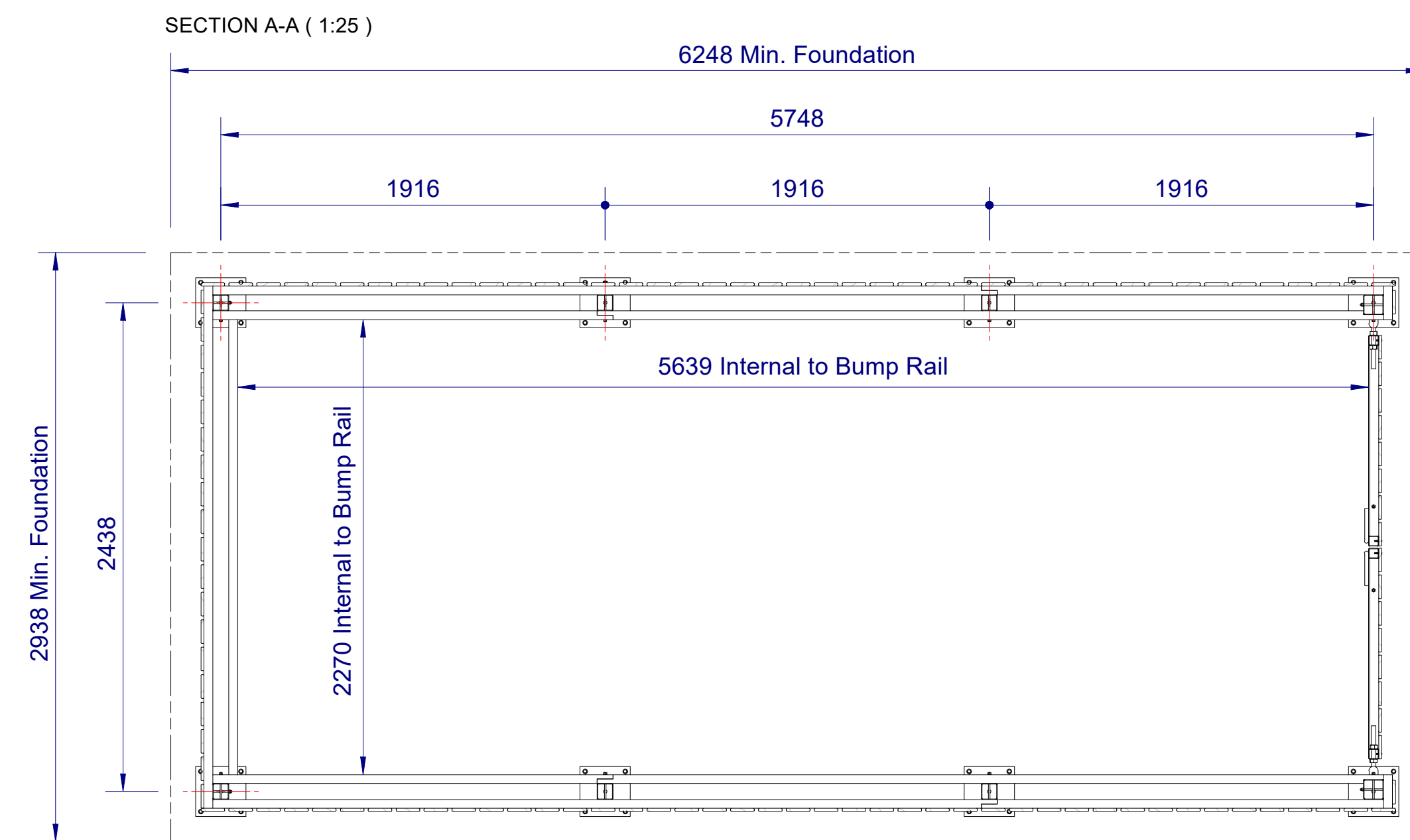
Whilst every attempt has been made to ensure the accuracy and reliability of the information contained in this leaflet Glenavon Timber Services gives no undertaking to that effect and no responsibility can be accepted for reliance on this information. All trademarks are trademarks of their respective owners.

DECLARATION BY THE TREATING COMPANY

We declare that the timber detailed on this certificate has been treated with a Wolmanit Preservative, using a High Pressure impregnation system

Signature:

Date: 08/01/2026



TOLERANCES UNLESS OTHERWISE SPECIFIED

DIMENSION:-	<10	<100	<250	>250	DEG
±	0.5	1	2	3	0.5

THIS IS A CAD DRAWING & MUST NOT BE MODIFIED MANUALLY. THIS DRAWING IN THE PROPERTY OF LANGLEY DESIGN. IT IS STRICTLY CONFIDENTIAL AND MUST NOT BE COPIED, TRACED OR LOANED WITHOUT THEIR PERMISSION.			FILE REFERENCE		TITLE.	
 LangleyDesign	CLIENT. Zed Pods		ALL DIMENSIONAL UNITS ARE AS STATED, ALL TOLERANCES ± 0.0mm UNLESS OTHERWISE STATED		DRAWN BY. Dave Collins	
	PROJECT. Somerlea				DATE. 06/01/2026	
	UNIT 1, CHELWORTH IND. EST. CHELWORTH ROAD, CRICKLADE, WILTSHIRE, SN6 6HE TEL: 01793 759461 FAX: 01793 759462 EMAIL: INFO@LANGLEYDESIGN.CO.UK		SCALE. 1:25	PAPER SIZE. A1	UNITS. MM	MATERIAL.
			DRG. No. LDINV-3758-10-100.idw		REV. 2	
GENERAL ARRANGEMENT Item A – SBS302-VE/C/TRC4/GL LDINV-3758-MA01						

Safety Data Sheet

According to REACH Regulation No. 1907/2006/EC as amended by Regulation 2015/830/EC

Identification of the substance/mixture and of the company/undertaking**Product identifier**

Trade name: R-KER-II, R-KER-II – S, R-KER-II – W

Product: mixture**Relevant identified uses of product**

Chemical anchoring system for building industry.

Details of the supplier of the safety data sheet

Company name and address	Rawlplug S.A. ul. Kwidzyńska 6 51-416 Wrocław Poland
Telephone number	+48 (0) 71 32 60 100
E-mail address of competent person responsible for the SDS	infochem@rawlplug.com

General information**Storage**

Storage temperature: 5-25 °C. Protect the product against solar radiation. Store the product in a well-ventilated place.

Comment

A separate safety data sheet has been prepared for each component. Do not separate any SDS from the title page.

Additional information

The 2-component cartridge contains:

- Component A : vinylester resin, inorganic powdery extenders, liquid rheological additives
- Component B : hardener with benzoyl peroxide.

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Trade name: R-KER-II- A, R-KER-II - A – S, R-KER-II -A – W

Product form: mixture

UFI code: 4600-Y09E-Y009-4JT7

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

Chemosetting resin paste

1.3. Details of the supplier of the safety data sheet

Company name and address:	Rawlplug S.A. ul. Kwidzyńska 6 51-416 Wrocław Poland
Telephone number	+48 (0) 71 32 60 100
E-mail address of competent person responsible for the SDS	infochem@rawlplug.com

1.4. Emergency telephone number: + 48 661 970 365

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Commission Regulation (EC) No. 1272/2008:

Skin Sens. 1	H317	May cause an allergic skin reaction.
Acute Tox. 4	H302	Harmful if swallowed.
STOT RE 2	H373	May cause damage to organs (lungs) through prolonged or repeated exposure.
Eye Dam. 1	H318	Causes serious eye damage.

2.2. Label elements

GHS Pictograms:



Signal word:

Danger

Hazard statements:

H317	May cause an allergic skin reaction.
H302	Harmful if swallowed.
H373	May cause damage to organs (lungs) through prolonged or repeated exposure.
H318	Causes serious eye damage.

Precautionary statements:

Prevention:	P280	Wear protective gloves, protective clothing, eye protection, face protection.
	P260	Do not breathe dust.
	P264	Wash (hands) thoroughly after handling.
Response:	P310	Immediately call a POISON CENTER or doctor.
	P302+352	IF ON SKIN: Wash with plenty of 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.
Storage:	-	
Disposal:	P501	Dispose of contents/container to local/regional/national/international regulations.

Dangerous substances:

Portland cement
Diisopropanol-p-toluidine A
Portland cement dust
Quartz

2.3. Other hazards This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Section 3: Composition/information on ingredients

3.1. Substances Not applicable

3.2. Mixtures

Product identifiers	Ingredient name	Content (% wt.)	Classification
			(EC) 1272/2008 [CLP]
CAS: 109-16-0 WE: 203-652-6 Reg. nr: 01-2119969287-21-XXXX	Triethylene glycol dimethacrylate	16-27,4	Skin Sens. 1, H317
CAS: 65997-15-1 WE: 266-043-4	Portland cement	< 7	Eye Dam. 1, H318 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335
CAS: 38668-48-3 WE: 254-075-1 Reg.nr: 01-2119980937-17-XXXX	Diisopropanol-p-toluidine A	< 4	Aquatic Chronic 3, H412 Acute Tox. 2, H300 Eye Irrit. 2, H319
CAS: 14808-60-7 WE: 238-878-4 Reg.nr: released in accordance with annex V.7	Quartz	< 6	STOT RE 1, H372
CAS: 68475-76-3 WE: 270-659-9 Reg.nr: 01-2119486767-17-XXXX	Dust from portland cement	< 0,12	Eye Dam. 1, H318 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335

Additional information: For the wording of the listed phrases refer to section 16.

Section 4: First aid measures

4.1. Description of first aid measures

General notes:	Remove/Take off immediately all contaminated clothing.
Following inhalation:	Move the exposed individual to the fresh air and keep at rest in a position comfortable for breathing. If not breathing, breathing is irregular or respiratory arrest occurs, artificial respiration should be provided or oxygen should be given by qualified personnel. If unconscious, place in recovery position and get medical attention immediately. Contact toxicology center.
Following skin contact:	Wash with plenty of soap and water. Remove contaminated clothing and shoes. In case irritation or any complaints occur, get medical attention and avoid further exposure.
Following eye contact:	Immediately flush eyes with plenty of water. Check for and remove any contact lenses. Eyes may be irritated and red.
Following ingestion:	Wash your mouth with water. Remove to fresh air and provide conditions for rest in a position that allows breathing. Do not induce vomiting. If the injured is conscious, give him half a liter of water to drink immediately. Transfer to hospital as soon as possible.

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

Product can cause irritation to eyes, skin and respiratory system. It can also lead to skin sensitization. After exposure, symptoms can be delayed. Contact with eyes can result in eye erythema and excessive lacrimation. Exposure of inhalation routes can cause coughing. Prolonged exposure of skin can cause erythema. Lack of data on symptoms occurring after ingestion.

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

No data.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	Use dry chemical (ABC powder) or CO ₂ , alcohol resistant foam. Use water dust to cool containers.
Unsuitable extinguishing media:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

In case of exposition on an open flame, a pressure rises and a packaging may explode. In case of fire, there is a risk of formation of hazardous decomposition products: carbon oxides, unidentified hydrocarbons, nitrogen and sulfur oxides.

5.3. Advice for firefighters

Use full protective clothing compliant with EN 469 standard. Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

No action involving any health risk shall be taken through contact with product. Avoid contact with product without personal protective equipment, in case of contact with product when ventilation is insufficient. Avoid breathing vapors. Ensure adequate ventilation, wear a suitable mask. If a leak occurs, turn the leaking container so that the leak is at the top.

For emergency responders:

Disposal of large quantities of the product should be carried out with personal protective equipment as described in section 8.

6.2. Environmental precautions

Avoid material entering the soil, sewage system, ground water and surface water. Stop further spreading by embankment.

6.3. Methods and material for containment and cleaning up

The product should be absorbed with dry earth or sand. Move the waste to an emergency container, labeled and closed. Use personal protective equipment that is legitimate with national provisions.

6.4. Reference to other sections

See section 8 for information on appropriate personal protective equipment.
See section 13 for additional waste treatment information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Put on appropriate personal protective equipment (see section 8). Persons with a history of skin sensitization problems should avoid contact with product. Do not allow product to contact eyes or skin. Avoid breathing vapors released during curing process. Use only in places with sufficient ventilation. Wear appropriate respirator when ventilation is inadequate. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Follow the manufacturer's instructions for use of product. Keep product in the original container. Do not use product after the expiration date.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container, keep tightly closed when not in use. Protect from direct sunlight and other heat sources in dry, well-ventilated area, away from incompatible materials, food and drink. Store at 5– 25 °C. To ensure product stability avoid temperature fluctuation during storage (overheating and undercooling).

7.3. Specific end use(s)

See Section 1

Section 8: Exposure controls/personal protection

8.1. Control parameters

Mixture component and CAS number	NDS	NDSch	NDSP
Cement dust - inhalable fraction 65997-15-1	6 mg/m ³	-	-
Cement dust - respirable fraction 65997-15-1	2 mg/m ³	-	-
Calcium carbonate (dust) 471-34-1	10 mg/m ³	-	-

Ingredient name and CAS number		Maximum acceptable concentration	
		mg/m ³	fibers in cm ³
Crystalline Silica Dust 14808-60-7	inhalable fraction	2	-
	respirable fraction	0,3	-

The Regulation of the Minister of Labour and Social Policy of June 12th, 2018 on maximal authorized concentrations and intensity of factors harmful to health in work environment (Dz.U. 2018 poz. 1286).

The Regulation of the Minister of Health of 2 February 2011. On tests and measurements of health hazard factors in the work environment (Dz. U. No. 33, item 166 2011).

The Regulation of the Minister of Health of 30 December 2004. On occupational health and safety related to occurrence of chemical agents at work (Dz. U. No. 33, pos. 86, 2005).

Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

Commission Directive 2000/39/EC of 8 June 2000 Commission Directive 2000/39/EC of June establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (Sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC).

DN(M)EL

Mixture component and CAS number	Route of exposure	Value	Group	Effect
Portland cement dust 68475-76-3	Inhalation	840 µg/m ³	Workers	Local, long-term
Triethylene glycol dimethacrylate 109-16-0	Dermal	13,9 mg/kg	Workers	Systemic effects, long-term
	Inhalation	8,33 mg/kg	Consumers	Systemic effects, long-term
		48,5 mg/m ³	Workers	Local, long-term
		14,5 mg/m ³	Consumers	Systemic effects, long-term
Diisopropanol-p-toluidine 38668-48-3	Oral	8,33 mg/kg	Workers	Systemic effects, long-term
		0,7 mg/kg bw/day	Workers	Systemic effects, long-term
	Dermal	0,3 mg/kg	Consumers	Systemic effects, long-term
	Inhalation	2,4 mg/ m ³	Workers	Systemic effects, long-term

	Oral	00,25 mg/kg bw/day	Consumers	Systemic effects, long-term
--	------	--------------------	-----------	-----------------------------

PNEC

Mixture component and CAS number	Environmental protection target	Value
Triethylene glycol dimethacrylate 109-16-0	Fresh water	0,17 mg/l
	Intermittent releases	0,17 mg/l
	Marine water	0,0017 mg/l
	Sewage treatment plant	199,5 mg/l
	Sediment freshwater	0,163 mg/kg/dw
	Sediment marine water	0,0163 mg/kg/dw
Diisopropanol-p-toluidine A 38668-48-3	Fresh water	0,0164 mg/l
	Marine water	0,0164 mg/l
	Intermittent releases	0,00164 mg/l
	Sewage treatment plant	1,7 mg/l
	Sediment freshwater	0,185 mg/kg/dw
	Sediment marine water	0,0185 mg/kg/dw

8.2 Exposure controls

Appropriate technical protection: Ensure sufficient ventilation in working place. In case of insufficient ventilation use appropriate engineering controls (e.g. local fume hood) which will keep exposure level below recommended threshold, or use appropriate breathing apparatus

Individual protective measures:

General recommendation: Obey hygiene rules: do not eat, drink, or smoke at workplace. Wash your hands with soap and water after you finish working with product. Avoid eye and skin contamination. Ensure effective ventilation at the workplace.

Eye/face protection: Use safety glasses with side shields.

Hand protection: Use chemical resistant gloves standard when working with the product. It is advised to use butyl or nitrile rubber gloves. Observe the glove manufacturer's recommendations on puncture and penetration times.

Skin protection: Use protective clothes.

Respiratory protection: At concentrations causing irritation use mask with filter type: A – against organic gases and vapors.

Remarks: Advice on personal protection is applied for high exposure levels. Appropriate personal protective equipment should be picked according to the risk comes from the product usage. Personal protective equipment must meet requirements of directive 89/686/CE.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Solids in paste form

Colour: Brown

Smell: Characteristic

Odour threshold: Not determined

pH: 8

Initial boiling point and boiling range: Not applicable

Initial boiling point and boiling range: Not determined

Flash point : Not applicable

Evaporation rate: Not determined

Flammability (solid, gas):	Inflammable
Upper/lower flammability or explosive limits:	Not determined
Vapour pressure:	Not applicable (product is in solid state)
Relative density:	1,73 ± 0,3 [g/cm ³]
Solubility:	Insoluble in water, partly soluble in acetone and isopropyl alcohol
Partition coefficient n-octanol/water:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Dynamic viscosity (23°C; 100 [s ⁻¹]):	R-KER-II 5 ± 2 [Pa·s] R-KER-II-S 6 ± 2 [Pa·s] R-KER-II-W 6 ± 2 [Pa·s]
Explosive properties:	Not determined
Oxidizing properties:	Not determined

9.2. Other information No data.

Section 10: Stability and reactivity

10.1. Reactivity

No specific data available.

10.2. Chemical stability

Product is stable under normal storage conditions (temp. 5 - 25°C). In the case of visible changes in the consistency of the product, the presence of significant amounts of air in components it is recommended to cessation work with the product.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored under normal conditions of use.

10.4. Conditions to avoid

To avoid thermal degradation of product do not allow to overheat it over the temperature of recommended storage. Protect from sunlight.

10.5. Incompatible materials

No specific data

10.6. Hazardous decomposition products

Unidentified hydrocarbons, carbon and nitrogen oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity The product may be harmful if swallowed.

Ingredient name and CAS number	Route of exposure	Species	Result
Triethylene glycol dimethacrylate 109-16-0	LD50 (oral)	Rat	10837 mg /kg
	LD50 (skin)	Mouse	>2000 mg/kg
Flue dust portland cement 68475-76-3	LD50 (oral)	Rat	>1848 mg/kg
	LD50 (skin)		>=2000 mg/kg
Diisopropanol- <i>p</i> -toluidine A 38668-48-3	LD50 (oral)	Rat	>6,04 mg/l
	LD50 (skin)		25 mg/kg
			>2000 mg/kg

Irritation / Corrosivity

Based on available data for ingredients of the product, it causes serious eye damage.

<u>Respiratory or skin sensitisation</u>	Based on the available data for the ingredients in the mixture, the product can be considered a moderate skin sensitizer, and may have delayed hypersensitivity.
<u>Mutagenicity</u>	Based on available data for the ingredients in the mixture, classification criteria are not met for the product.
<u>Carcinogenicity</u>	Based on available data for the ingredients in the mixture, classification criteria are not met for the product.
<u>Reproductive toxicity</u>	Based on available data for the ingredients in the mixture, classification criteria are not met for the product.
<u>Single dose toxicity</u>	Based on available data for the ingredients in the mixture, classification criteria are not met for the product.
<u>Repeated dose toxicity</u>	May cause damage to organs [lung organs] through prolonged or repeated exposure [Inhalation].
<u>Aspiration hazard</u>	Based on available data for the ingredients in the mixture, classification criteria are not met for the product.

Symptoms related to the physical, chemical and toxicological characteristics:

Inhalation:	Vapors released during curing process may cause respiratory tract irritation, coughing, nausea and dizziness. Exposure to decomposition products may cause a health hazard Serious effects may be delayed following exposure.
Skin exposure:	Irritation and redness. May cause sensitization by skin contact. Skin reaction may be delayed in time.
Eye exposure:	Pain, lacrimation, irritation and redness
Ingestion:	No specific data

Section 12: Ecological information

12.1. Toxicity

Ingredient name and CAS number	Dose/time of exposure/method	Species	Results
Triethylene glycol dimethacrylate 109-16-0	LC ₅₀ / 96h / OECD 203 EC ₅₀ / 21d / OECD 211	Danio rerio (fish) Daphnia magna	16,4 mg/l 51,9 mg/l
Dust portland cement 68475-76-3	LC ₅₀ / 96h / OECD 203 EC ₅₀ / 48h / OECD 202 EC ₅₀ (growth rate)/ 72h / OECD 201	Danio rerio Daphnia magna Desmodesmus subspicatus	17 mg/l 28,8 mg/l 245 mg/l
Diisopropanol- <i>p</i> -toluidine A 38668-48-3	LC ₅₀ / 96h / F.1.1 of UBA EC ₅₀ / 48h / OECD 202 EC ₅₀ (growth rate) / 72h / OECD 201	Danio rerio Daphnia magna Desmodesmus subspicatus	17 mg/l 28,8 mg/l 245 mg/l

12.2. Persistence and degradability

Triethylene glycol dimethacrylate 109-16-0	Degr. 85% after 28 days. Readily biodegradable (OECD 301 B)
Diisopropanol- <i>p</i> -toluidine A 38668-48-3	Degr. 39,1% after 28 days . Readily biodegradable (OECD 301 B)

12.3. Bioaccumulative potential

Triethylene glycol dimethacrylate	log Kow = 1,88.
-----------------------------------	-----------------

109-16-0	Low bioaccumulative potential , BCF = 16
----------	--

12.4. Mobility in soil

Triethylene glycol dimethacrylate 109-16-0	log Koc = 1,89 (Kow)
Diisopropanol- <i>p</i> -toluidine A 38668-48-3	log Koc = 0,918

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects

No reports on other adverse effects

Section 13: Disposal considerations

13.1. Waste treatment methods

Product: Minimum waste quantities. Must not be disposed together with household garbage. Do not allow product to reach sewage system, ground water and water course. Uncured product dispose of as a chemical waste in licensed facility, in accordance with local regulations of environmental protection and binding legislation on recycling. It is recommended to incinerate wastes arose during product usage in a proper incineration oven. Small quantities of both components may be reacted together, allowed to cure and dispose of as a solid waste.

Packaging: Used product packaging (cartridge) may be delivered to plastic waste recycling plant. Contaminated package must be disposed like wastes arose during product usage

Hazardous waste codes (EWC): 08 04 09 – Waste adhesives and sealants containing organic solvents or other dangerous substances;
07 02 13 – waste plastic;
16 03 05 – organic wastes containing hazardous substances;
15 02 02 – absorbents, filter materials (including oil filters not otherwise specified); wiping cloths, protective clothing contaminated by hazardous substances;
15 01 10 – packaging containing residues of or contaminated by hazardous substances.

Law of December 14th, 2012 on waste (Journal of Laws No. 0, item 21, 2012 as amended);

Law of June 13th, 201 on packaging and packaging waste (Journal of Laws No. 0, item 888, 2013); Regulation of the Minister of Environment dated September 29th, 2014 on waste catalogue (Journal of Laws No. 0, item 1923, 2014).

Section 14: Transport information

14.1 UN numer

Inapplicable

14.2 UN proper shipping name

Inapplicable

14.3 Transport hazard class (es)

Inapplicable

14.4 Packing group

Inapplicable

14.5 Environmental hazards

The environmental impact as specified in the criteria of the UN model regulations

14.6 Special precautions for user

None

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Inapplicable

Section 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No 1907/2006 (text with EEA relevance).

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC of 20 December 1994 on packaging and packaging waste.

COMMISSION REGULATION (EU) 2018/669 of 16 April 2018 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

REGULATION (EU) No 528/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 May 2012 concerning the making available on the market and use of biocidal products.

15.2. Chemical safety assessment

Not applicable

Section 16: Other information

Full text of H statements:

H317	May cause an allergic skin reaction.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H412	Harmful to aquatic life with long lasting effects.

Hazard class:

Acute Tox. 2	Acute toxicity, category 2.
Acute Tox. 4	Acute toxicity, category 4.
Eye Dam. 1	Eye damage, category 1.

Eye Irrit. 2	Eye irritation, category 2 .
Skin Irrit. 2	Skin irritant, category 2.
Skin Corr. 1B	Skin corrosive, category 1B.
Skin Sens. 1	Skin sensitization, category 1.
STOT SE 3	Specific target organ toxicity – Single exposure – category 3
STOT RE 2	Specific target organ toxicity – Repeated exposure – category 2
Aquatic Chronic 3	Aquatic Chronic, category 3.

Acronyms and abbreviations:

NDS	Occupational Exposure
NDSCh	Maximum Permissible Instantaneous Concentration
NDSP	Maximum permitted ceiling concentration
DNEL	Derived no-effect level
PBT	Substancja trwała, zdolna do bioakumulacji i toksyczna
vPvB	Substancja bardzo trwała, wykazująca bardzo dużą zdolność do bioakumulacji
SvHc	Substances of Very High Concern
STOT RE, SE	Repeated, Single Exposure
STOT	Specific Target Organ Toxicity
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation No 1907/2006
P(N)EC	Predicted (No) Effect Concentration
LD ₅₀	Median Lethal Dose
LC ₅₀	Lethal concentration, 50%
EU	European Union
EN	European Standard
CAS	Chemical Abstracts Service number

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) No 1272/2008	Classification procedure
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Acute Tox. 4, H302	Calculation method
STOT RE2, H373	Calculation method

Alterations compared to the previous version

Training advice:

1, 9

People using the product professionally, should be trained in handling the product, safety and hygiene. Drivers should be trained and obtain the appropriate certificate in accordance with the ADR requirements

The information contained in the Safety Data Sheet is based on current state of knowledge and applies to product with its identified use. The information is intended to aid the user in controlling the handling risks and not to guarantee product quality. If conditions of product use are not under manufacturer control, responsibility for safe use falls to the user. Employer is obliged to inform all employees working with the product, about possible hazards and personal protection specified in Safety Data Sheet.

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: R-KER-II- B, R-KER-II-B – S, R-KER-II-B – W
 Product form: mixture
 UFI code: JJ40-S0GP-K00H-VYHH

1.2. Relevant identified uses of product

Initiator of polymerization and crosslinker for vinyl ester and polyester resins.

1.3. Details of the supplier of the safety data sheet

Company name and address:	Rawlplug S.A. ul. Kwidzyńska 6 51-416 Wrocław Poland
Telephone number	+48 (0) 71 32 60 100
E-mail address of competent person responsible for the SDS	infochem@rawlplug.com

1.4. Emergency telephone number: + 48 661 970 365

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Commission Regulation (EC) No. 1272/2008:

Org. Perox. E	H242	Heating may cause a fire.
Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.
Eye Irrit 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.

2.2. Label elements

GHS Pictograms:



Signal word: Warning

H242	Heating may cause a fire.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.

Precautionary statements:

Prevention:	P280	Wear protective gloves, protective clothing, eye protection, face protection.
	P210	Keep away from heat, sparks, open flames, hot surfaces. — No smoking.
	P273	Avoid release to the environment.
Response:	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P391	Collect spillage.

Storage: P370+P378 In case of fire: Use dry extinguishing powders to extinguish.
 Removal: P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Dangerous substances:

Dibenzoyl peroxide

2.3. Other hazards

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

Section 3: Composition/information on ingredients

3.1. Substances Not applicable

3.2. Mixtures

Product identifiers	Ingredient name	Content (% wt.)	Classification
			(EC) 1272/2008 [CLP]
CAS: 94-36-0 Reg.nr: 01-2119511472-50-xxxx WE: 202-327-6	Dibenzoyl peroxide	15-20	Org. Perox. B, H241 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Eye Irrit. 2, H319 Skin Sens. 1, H317
CAS: 107-21-1 Reg nr.: 01-2119456816-28-xxxx WE: 203-473-3	Ethanediol	5-9,9	STOT RE 2, H373 Acute Tox. 4, H302

Additional information: For the wording of the listed phrases refer to section 16.

Section 4: First aid measures

4.1. Description of first aid measures

General notes: Remove/Take off immediately all contaminated clothing.

Following inhalation: Move the exposed individual to the fresh air and keep at rest in a position comfortable for breathing. If not breathing, breathing is irregular or respiratory arrest occurs, artificial respiration should be provided or oxygen should be given by qualified personnel. If unconscious, place in recovery position and get medical attention immediately. Contact toxicology center.

Following skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. In case irritation or any complaints occur, get medical attention and avoid further exposure.

Following eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor

Following ingestion: Rinse mouth with water. Remove to fresh air and provide conditions for rest in a position that allows breathing. Do not induce vomiting. If the injured is conscious, give him half a liter of water to drink immediately. Transfer to hospital as soon as possible.

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

No further relevant information available.

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

No further relevant information available.

Section 5: Firefighting measures.

5.1. Extinguishing media

Suitable extinguishing media: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.

Unsuitable extinguishing media: Unknown

5.2. Special hazards arising from the substance or mixture

In case of fire, the following can be released: carbonic anhydride (CO₂) carbon monoxide (CO), benzoic acid, benzene, biphenyl, phenyl benzoate. Under certain fire conditions, traces of other toxic gases cannot be excluded.

5.3. Advice for firefighters

Do not inhale explosion gases or combustion gases. Mouth respiratory protective device. Wear suitable fire protection equipment. · Additional information Cool endangered receptacles with water spray. Collect contaminated water separately. It must not enter the sewage system.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

No action involving any health risk shall be taken through contact with product. Avoid contact with product without personal protective equipment, in case of contact with product when ventilation is insufficient. Avoid breathing vapors. Ensure adequate ventilation, wear a suitable mask. If a leak occurs, turn the leaking container so that the leak is at the top.

For emergency responders:

Disposal of large quantities of the product should be carried out with personal protective equipment as described in section 8.

6.2. Environmental precautions

Avoid material entering the soil, sewage system, ground water and surface water. In the event of environmental pollution, inform the relevant authorities.

6.3. Methods and material for containment and cleaning up

Pick up mechanically. Do not allow to dry out. Ensure adequate ventilation.

6.4. Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Use personal protection (see section 8). Use only in well ventilated areas. Ensure good ventilation/exhaustion at the workplace. Keep away from heat and direct sunlight. Protect against electrostatic charges.

7.2. Conditions for safe storage, including any incompatibilities

Store the product tightly closed in its original packaging, away from sunlight and other heat sources, in a dry, well-ventilated room. Keep away from reducing agents, heavy metals. Acids and bases. Store between 5 and 25 ° C for 12 months. To maintain durability, avoid temperature fluctuations during storage (overheating and subcooling).

7.3. Specific end use(s)

See section 1.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Mixture component and CAS number	NDS	NDSch	NDSP
Dibenzoyl peroxide 94-36-0	5 mg/m ³	10 mg/m ³	-
Ethanediol 107-21-1	15 mg/m ³	50 mg/m ³	-

The Regulation of the Minister of Labour and Social Policy of June 12th, 2018 on maximal authorized concentrations and intensity of factors harmful to health in work environment (Dz.U. 2018 poz. 1286).

The Regulation of the Minister of Health of 2 February 2011. On tests and measurements of health hazard factors in the work environment (Dz. U. No. 33, item 166 2011).

The Regulation of the Minister of Health of 30 December 2004. On occupational health and safety related to occurrence of chemical agents at work (Dz. U. No. 33, pos. 86, 2005).

Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.

Commission Directive 2000/39/EC of 8 June 2000 Commission Directive 2000/39/EC of June establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (Sixth individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC).

DN(M)EL

Mixture component and CAS number	Route of exposure	Value	Group	Influence
Dibenzoyl peroxide 94-36-0	Oral	2,0 mg/kg	Consumers	Systemic, long-term
	Dermal	13,3 mg/kg	Workers	Systemic, long-term
	Inhalative	39,0 mg/m ³	Workers	Systemic, long-term
Ethanediol 107-21-1	Dermal	53 mg/m ³	Consumers	Systemic, long-term
		106 mg/kg	Workers	Systemic, long-term
	Inhalative	35 mg/m ³	Workers	Systemic, long-term
		7 mg/m ³	Consumers	Systemic, long-term

PNEC

Mixture component and CAS number	Environmental protection target	Value
Dibenzoyl peroxide 94-36-0	Fresh water	0,00002 mg/l
	Marine water	0,000002 mg/l
	Periodic release	0,000602 mg/l
	Soil	0,0025 mg/kg dw
	Wastewater treatment	0,35 mg/l
	Fresh water sediment	0,0127 mg/kg dw
	Marine water sediment	0,00127 mg/kg dw

8.2 Exposure controls

Appropriate technical protection: :

Ensure sufficient ventilation in working place. In case of insufficient ventilation use appropriate engineering controls (e.g. local fume hood) which will keep exposure level below recommended threshold, or use appropriate breathing apparatus

Individual protective measures:

General

recommendation:

Follow hygiene rules: do not eat, drink or smoke at the workplace. After finishing work, wash your hands thoroughly with soap and water. Avoid eye and skin contamination and inhalation of vapors. Ensure effective ventilation at the workplace.

Eye/face protection:

Safety glasses with side shields.

Hand protection:	It is recommended to use chemical protective gloves or medical gloves intended to protect the user against chemical hazards (category III), in accordance with the standard, e.g. EN 374. It is recommended to use gloves made of butyl, polychloroprene and nitrile rubber, viton with a thickness of > 0.14 mm. The glove manufacturer's recommendations regarding breakthrough time and permeation should be followed. The glove used as protection against chemical agents should meet the requirements of level 2 effectiveness when using three chemical substances listed in the PN-EN 374-1: 2005 standard. In order to minimize the amount of moisture in the glove resulting from sweating, you need to change gloves in one shift. Check the tightness of the glove before each use.
Skin protection:	Wear protective clothing. Take off immediately all contaminated clothing.
Respiratory protection:	At a concentration causing irritation, use a type A combination mask. Before starting work, it is recommended to specify the minimum value of the protection factor in order to correctly select the class and type of respiratory protection equipment.
Remarks:	Personal protection tips apply at high levels of exposure. Appropriate personal protection equipment should be selected according to the resulting threat from exposure to the product and meet the requirements of the Regulation of the Minister of Economy of December 21, 2005 on the essential requirements for personal protective equipment (Journal of Laws 2005 No. 259 item 2173) and Directive 89/686 / EC (together with as amended).

Environmental exposure controls:

Mixture component and CAS number	Reference values of the substance in the air, averaged over the period:	
	1 hour	1 year
Dibenzoyl peroxide 94-36-0	100 µg/m ³	13 µg/m ³
Ethanediol 107-21-1	100 µg/m ³	10 µg/m ³

Legal basis: Regulation of the Minister of the Environment of January 26, 2010 on the reference value for some substances in the air (Journal of Laws 2010 No. 16 item 87).

Section 9: Physical and chemical properties

9.1. Informacje na temat podstawowych właściwości fizycznych i chemicznych

Appearance:	Solids in paste form
Colour	Brown
Smell:	Characteristic
Odour threshold:	Not determined
pH:	Not determined
Initial boiling point and boiling range	Not applicable
Initial boiling point and boiling range:	Not determined
Flash point :	Not applicable. Above the SADT value: 50 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not applicable
Upper/lower flammability or explosive limits:	Not determined
Vapour pressure:	Not applicable (product is in solid state)
Relative density:	1,4 – 1,5 g/cm ³ (PN-EN 542)
Solubility:	Insoluble in water
Partition coefficient n-octanol/water:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	SADT = 50 °C
Dynamic viscosity (23°C; 100 [s ⁻¹]):	3,6 ± 0,5 [Pa·s] (EN ISO 3219)
Explosive properties:	Not determined

Oxidizing properties:

Has oxidizing properties

9.2. Other information No data

Section 10: Stability and reactivity

10.1. Reactivity

No further relevant information available.

10.2. Chemical stability

No decomposition if used and stored according to specifications. Exothermic thermal decomposition. Visible decomposition with spontaneous ignition on heating. SADT = 50 °C.

10.3. Possibility of hazardous reactions

Reacts with reducing agents, heavy metals, alkali, amines and strong acids.

10.4. Conditions to avoid

To avoid thermal degradation of the product, do not allow overheating above the recommended storage temperature. Do not expose to sunlight. Overheating of component B above SADT (self-accelerating decomposition, see section 9.1) may cause spontaneous decomposition of the substance in the packaging during transport.

10.5. Incompatible materials

No data

10.6. Hazardous decomposition products

Benzoic acid, benzene, biphenyl, phenyl benzoate.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

Ingredient name and CAS number	Route of exposure	Species	Result
Dibenzoyl peroxide 94-36-0	LD ₅₀ (oral)	Rat	7712 mg/kg
	LD ₅₀ (inhalation)	Rat	24,3 mg/l
Ethandiol 107-21-1	LD ₅₀ (oral)	Rat	7712 mg/kg
	LD ₅₀ (dermal)	Mouse	>3500 mg/kg

Irritation / Corrosivity

Skin: Based on available data for the ingredients in the mixture, the classification criteria are not met for the product.

On the eyes: Causes serious eye irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Single dose toxicity

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

Repeated dose toxicity

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

Aspiration hazard

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

Section 12: Ecological information

12.1. Toxicity

Ingredient name and CAS number	Doses / exposure time / method	Species	Result
--------------------------------	--------------------------------	---------	--------

Dibenzoyl peroxide 94-36-0	LC ₅₀ / 96h / OECD 203 EC ₅₀ / 48h / OECD 202 EC ₅₀ (growth rate) / 72h / OECD 201 NOEC / 96h EC10 / 21d / OECD TG 211 NOEC / 72 h/	Oncorhynchus mykiss Daphnia magna Pseudokirchnerella subcapitata Fish Daphnia magna Pseudokirchnerella subcapitata	0,0602 mg/l 0,110 mg/l 0,0711 mg/l 0,0316 mg/l 0,001 mg/l 0,02 mg/l
Ethanediol 107-21-1	LC50 / 96h / bd EC ₅₀ / 48h / OECD 202	Pimephales promelas Daphnia magna	72860 mg/l ≥100 mg/l

12.2. Persistence and degradability

Dibenzoyl peroxide 94-36-0	Degr. 71% after 28 days. Readily biodegradable (OECD 301 D).
Ethanediol 107-21-1	Degr. 90-100% after 10 days. Readily biodegradable (OECD 301A)

12.3. Bioaccumulative potential

Dibenzoyl peroxide 94-36-0	Log Kow = 3,2 (OECD TG 117)
-------------------------------	-----------------------------

12.4. Mobility in soil

Dibenzoyl peroxide 94-36-0	Log K _{oc} = 3,8 (OECD TG 121)
-------------------------------	---

12.5. Results of PBT and vPvB assessment

None of the substances contained in the product meets the PBT or vPvB criteria according to with Annex XIII of the REACH Regulation.

12.6. Other adverse effects

No further relevant information available.

Section 13: Disposal considerations

13.1 Waste treatment methods:

Product:	Must not be disposed together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.
Packaging:	Disposal must be made according to official regulations.
Hazardous waste codes (EWC):	Recommended waste codes: 08 04 09 - Waste adhesives and sealants containing organic solvents or other dangerous substances; 07 02 13 – waste plastic; 16 03 05 – organic wastes containing hazardous substances; 15 02 02 – absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances; 15 01 10 – packaging containing residues of or contaminated by hazardous substances

Law of December 14th, 2012 on waste (Journal of Laws No. 0, item 21, 2012 as amended);

Law of June 13th, 201 on packaging and packaging waste (Journal of Laws No. 0, item 888, 2013); Regulation of the Minister of Environment dated September 29th, 2014 on waste catalogue (Journal of Laws No. 0, item 1923, 2014).

Section 14: Transport information

	ADR/RID	IMDG	IATA
--	---------	------	------

UN Number	UN3077	UN3077	UN3077
UN Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s (dibenzoyl peroxide mixture)	Environmentally hazardous substance, solid, n.o.s (dibenzoyl peroxide mixture)	Environmentally hazardous substance, solid, n.o.s (dibenzoyl peroxide mixture)
Transport Hazard class	9	9	9
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.
Marine pollutant substances	Not applicable.	dibenzoyl peroxide mixture	Not applicable.
Spacial provision	375	2.10.2.7. Paragraph	A197
Contents	These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provision of this Code relevant to marine pollutants provided the packagings meet the general provision of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this Code relevant to any additional hazards continue to apply.	These substances when transported in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net weight per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of these Instructions provided the packagings meet the general provisions of 4;1.1.1, 4;1.1.3.1 and 4;1.1.5 of the ICAO-TI (IATA DGR: 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8).

Section 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No 1907/2006 (text with EEA relevance).

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC of 20 December 1994 on packaging and packaging waste.

COMMISSION REGULATION (EU) 2018/669 of 16 April 2018 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

REGULATION (EU) No 528/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 May 2012 concerning the making available on the market and use of biocidal products.

15.2. Chemical safety assessment:

No data

Section 16: Other information

Full text of H statements:

H241	Heating may cause a fire or explosion.
H242	Heating may cause a fire.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H319	Causes serious eye irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.

Hazard class:

Org. Perox. B	Organic Peroxide, category B.
Aquatic Acute 1	Aquatic Acute, category 1.
Aquatic Chronic 1	Aquatic Chronic, category 1.
Eye Irrit 2	Eye irritation, category 2.
Acute Tox.4	Acute Toxicity, category 4.
Skin Sens. 1	Skin Sensitisation , category 1.
STOT RE 2	Specific Target Organ Toxicity, Repeated Exposure category 2.

Acronyms and abbreviations:

NDS	Occupational Exposure
NDSCh	Maximum Permissible Instantaneous Concentration
NDSP	Maximum permitted ceiling concentration
DNEL	Derived no-effect level
PBT	Persistent, bioaccumulative and toxic substances
vPvB	Very persistent and very bioaccumulative
SvHc	Substances of Very High Concern
STOT RE, SE	Repeated, Single Exposure

STOT	Specific Target Organ Toxicity
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation No 1907/2006
P(N)EC	Predicted (No) Effect Concentration
LD ₅₀	Median Lethal Dose
LC ₅₀	Lethal concentration, 50%
EU	European Union
EN	European Standard
CAS	Chemical Abstracts Service number

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) No 1272/2008	Classification procedure
Eye Dam. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method
Org. Perox. E, H242	Based on research results

Alterations compared to the previous version:

1, 9

Training advice:

People using the product professionally, should be trained in handling the product, safety and hygiene. Drivers should be trained and obtain the appropriate certificate in accordance with the ADR requirements

The information contained in the Safety Data Sheet is based on current state of knowledge and applies to product with its identified use. The information is intended to aid the user in controlling the handling risks and not to guarantee product quality. If conditions of product use are not under manufacturer control, responsibility for safe use falls to the user. Employer is obliged to inform all employees working with the product, about possible hazards and personal protection specified in Safety Data Sheet.

Safety data sheet

Page: 1/14

BASF Safety data sheet according to Regulation (EC) No. 1907/2006

Date / Revised: 25.03.2014

Version: 2.0

Product: **Wolmanit CX-8F**

(ID no. 30586178/SDS_GEN_GB/EN)

Date of print 15.04.2014

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

1.1. Product identifier

Wolmanit CX-8F

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

Relevant identified uses: wood preservative

Recommended use: wood preservative, for industrial and professional users

1.3. Details of the supplier of the safety data sheet

Company:BASF Wolman GmbH
Dr.-Wolman-Str. 31-33
76547 Sinzheim, GermanyContact address:BASF plc
PO Box 4, Earl Road, Cheadle Hulme,
Cheadle, Cheshire
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222

E-mail address: product-safety-north@basf.com

1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards:

Causes burns.

Harmful if swallowed.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

According to Directive 67/548/EEC or 1999/45/EC

Directive 1999/45/EC ('Preparation Directive')

Hazard symbol(s)

C Corrosive.



N Dangerous for the environment.



R-phrases(s)

R34 Causes burns.

R22 Harmful if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S2 Keep out of the reach of children.

S13 Keep away from food, drink and animal feeding stuffs.

S20/21 When using do not eat, drink or smoke.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Hazard determining component(s) for labelling: copper(II) carbonate--copper(II) hydroxide(1:1), complexing agent based on ethanolamine and carboxylic acids (confidential), Bis-(N-cyclohexyldiazoniumdioxy)-copper

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Liquid wood preservative, based on: Copper compound

dissolved in: complexing agent based on ethanolamine and carboxylic acids (confidential)

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

copper(II) carbonate--copper(II) hydroxide(1:1)

Content (W/W): 13.04 %

CAS Number: 12069-69-1

EC-Number: 235-113-6

REACH registration number: 01-2119429040-56

Acute Tox. 4 (Inhalation - dust)

Acute Tox. 4 (oral)

Aquatic Acute 1

Aquatic Chronic 1

H332, H302, H400, H410

Bis-(N-cyclohexyldiazoniumdioxy)-copper

Content (W/W): 2.8 %

CAS Number: 312600-89-8

Acute Tox. 4 (oral)

Eye Dam./Irrit. 1

Aquatic Acute 1

Aquatic Chronic 1

H318, H302, H400, H410

complexing agent based on ethanolamine and carboxylic acids (confidential)

Content (W/W): >= 20 % - <= 50 %

Acute Tox. 4 (oral)

Skin Corr./Irrit. 1B

H314, H302

Hazardous ingredients

according to Directive 1999/45/EC

copper(II) carbonate--copper(II) hydroxide(1:1)

Content (W/W): 13.04 %

CAS Number: 12069-69-1

EC-Number: 235-113-6

REACH registration number: 01-2119429040-56

Hazard symbol(s): Xn, N

R-phrases(s): 20/22, 50/53

Bis-(N-cyclohexyldiazoniumdioxy)-copper

Content (W/W): 2.8 %

CAS Number: 312600-89-8

Hazard symbol(s): Xn, N

R-phrases(s): 22, 41, 50/53

complexing agent based on ethanolamine and carboxylic acids (confidential)

Content (W/W): $\geq 20\%$ - $\leq 50\%$

Hazard symbol(s): C

R-phrases: 34, 22

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

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

Symptoms: skin corrosion, Eye irritation

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

5.2. Special hazards arising from the substance or mixture

Carbon dioxide, carbon monoxide, nitrogen oxides, fumes/smoke, carbon black, corrosive gases/vapours

5.3. Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Do not breathe vapour/aerosol/spray mists. Handle in accordance with good industrial hygiene and safety practice.

6.2. Environmental precautions

Contain contaminated water/firefighting water. Do not allow to enter soil, waterways or waste water channels.

6.3. Methods and material for containment and cleaning up

For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.

For large amounts: Pump off product.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Avoid contact with the skin, eyes and clothing. Smoking, eating and drinking are forbidden in application area. For personal protection see section 8. Comply with the health and safety at work laws. Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

No special precautions necessary.

7.2. Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight. Store protected against freezing.

Frost sensitive

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

141-43-5: 2-aminoethanol; ethanolamine

TWA value 2.5 mg/m³ ; 1 ppm (WEL/EH 40 (UK))

STEL value 7.6 mg/m³ ; 3 ppm (WEL/EH 40 (UK))

TWA value 2.5 mg/m³ ; 1 ppm (OEL (EU))

indicative

STEL value 7.6 mg/m³ ; 3 ppm (OEL (EU))

indicative

Skin Designation (OEL (EU))

The substance can be absorbed through the skin.

Skin Designation (WEL/EH 40 (UK))

The substance can be absorbed through the skin.

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact

(Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures

Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	liquid
Colour:	blue
Odour:	faint specific odour
pH value:	approx. 9.8 (20 g/l, 25 °C)
Melting point:	approx. 0 °C
boiling temperature:	> 100 °C
Flash point:	Non-flammable.
Flammability:	not highly flammable
Vapour pressure:	not applicable
Density:	approx. 1.2 g/cm ³ (20 °C)
Self ignition:	Temperature: > 400 °C
Thermal decomposition:	> 250 °C
Viscosity, dynamic:	approx. 30 mPa.s (20 °C)
Explosion hazard:	not explosive

9.2. Other information

Miscibility with water:
miscible in all proportions

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

SECTION 10: Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

The product is stable if stored and handled as prescribed/indicated.

10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:
strong oxidizing agents, strong reducing agents

10.6. Hazardous decomposition products

No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Experimental/calculated data:

LD50 rat (oral): approx. 500 mg/kg (OECD Guideline 401)

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

Irritation

Experimental/calculated data:

Skin corrosion/irritation rabbit: Corrosive. (OECD Guideline 404)

Serious eye damage/irritation rabbit: Risk of serious damage to eyes. (OECD Guideline 405)

Respiratory/Skin sensitization

Experimental/calculated data:

Buehler test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Carcinogenicity

Assessment of carcinogenicity:

Not expected to be carcinogenic (based on composition).

Reproductive toxicity

Assessment of reproduction toxicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Developmental toxicity

Assessment of teratogenicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**Assessment of repeated dose toxicity:**

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Other relevant toxicity information

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

SECTION 12: Ecological Information**12.1. Toxicity****Toxicity to fish:**

LC50 (96 h) $\leq$ 1 mg/l, Brachydanio rerio (OECD Guideline 203, static)

Aquatic invertebrates:

LC50 (48 h) $<$ 1 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants:

EC50 (72 h) $<$ 1 mg/l, Selenastrum capricornutum (OECD Guideline 201)

Microorganisms/Effect on activated sludge:

EC50 (3 h) approx. 50 mg/l (OECD Guideline 209)

12.2. Persistence and degradability**Assessment biodegradation and elimination (H₂O):**

The ingredients based on copper can be virtually eliminated from water by abiotic processes e.g. adsorption onto activated sludge.

12.3. Bioaccumulative potential**Assessment bioaccumulation potential:**

Accumulation in organisms is not to be expected.

12.4. Mobility in soil**Assessment transport between environmental compartments:**

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

12.6. Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. Additional information

Other ecotoxicological advice:

The product should not be allowed to reach either sewage waters or water purification plants. The product has not been tested. The statements on ecotoxicology have been derived from products of a similar structure and composition.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

This material and its container must be disposed of in a safe way.
Must be disposed of or incinerated in accordance with local regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

Contaminated packaging:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

SECTION 14: Transport Information

Land transport

ADR

UN number	UN1760
UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (contains ALKYLAMINE, COPPER CARBONATE)
Transport hazard class(es):	8, EHSM
Packing group:	II
Environmental hazards:	yes
Special precautions for user:	Tunnel code: E

BASF Safety data sheet according to Regulation (EC) No. 1907/2006

Date / Revised: 25.03.2014

Version: 2.0

Product: **Wolmanit CX-8F**

(ID no. 30586178/SDS_GEN_GB/EN)

Date of print 15.04.2014

RID

UN number: UN1760
UN proper shipping name: CORROSIVE LIQUID, N.O.S. (contains ALKYLAMINE, COPPER CARBONATE)
Transport hazard class(es): 8, EHSM
Packing group: II
Environmental hazards: yes
Special precautions for user: None known

Inland waterway transport**ADN**

UN number: UN1760
UN proper shipping name: CORROSIVE LIQUID, N.O.S. (contains ALKYLAMINE, COPPER CARBONATE)
Transport hazard class(es): 8, EHSM
Packing group: II
Environmental hazards: yes
Special precautions for user: None known
Transport in inland waterway vessel: Not evaluated

Sea transport**IMDG**

UN number: UN 1760
UN proper shipping name: CORROSIVE LIQUID, N.O.S. (contains ALKYLAMINE, COPPER CARBONATE)
Transport hazard class(es): 8, EHSM
Packing group: II
Environmental hazards: yes
Marine pollutant: NO
Special precautions for user: None known

Air transport**IATA/ICAO**

UN number: UN 1760
UN proper shipping name: CORROSIVE LIQUID, N.O.S. (contains ALKYLAMINE, COPPER CARBONATE)
Transport hazard class(es): 8
Packing group: II
Environmental hazards: No Mark as dangerous for the environment is needed

Special precautions for user: None known

14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

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

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

Further information

This product is subject to the most recent edition of "The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations" and their amendments (United Kingdom).

SECTION 15: Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

Biocidal Products Directive 98/8/EC

BASF Safety data sheet according to Regulation (EC) No. 1907/2006

Date / Revised: 25.03.2014

Version: 2.0

Product: **Wolmanit CX-8F**

(ID no. 30586178/SDS_GEN_GB/EN)

Date of print 15.04.2014

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

This product is classified under the Chemicals (Hazard Information and Packaging) Regulations, (CHIP) (United Kingdom).

This product may be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments if specific threshold tonnages are exceeded (United Kingdom).

15.2. Chemical Safety Assessment

Chemical Safety Assessment not required

SECTION 16: Other Information

In addition to the information given in the safety data sheet we refer to the product specific 'Technical Information'.

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

Xn	Harmful.
N	Dangerous for the environment.
C	Corrosive.
20/22	Harmful by inhalation and if swallowed.
50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
22	Harmful if swallowed.
41	Risk of serious damage to eyes.
34	Causes burns.
Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Eye Dam./Irrit.	Serious eye damage/eye irritation
Skin Corr./Irrit.	Skin corrosion/irritation
H332	Harmful if inhaled.
H302	Harmful if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H318	Causes serious eye damage.
H314	Causes severe skin burns and eye damage.

If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

BASF Safety data sheet according to Regulation (EC) No. 1907/2006

Date / Revised: 25.03.2014

Version: 2.0

Product: **Wolmanit CX-8F**

(ID no. 30586178/SDS_GEN_GB/EN)

Date of print 15.04.2014

Vertical lines in the left hand margin indicate an amendment from the previous version.