



# R 23 CE

## Self-Smoothing Medium Duty Epoxy Underlay

### DESCRIPTION

R 23 CE is a solvent free, economical, self-smoothing, epoxy based underlay applied between 1.5 - 3 mm thickness. It combines the mechanical properties with chemical resistance to provide a flat, seamless surface to receive epoxy or polyurethane based coating or topping, tiling with epoxy or PU adhesive.

### USES

R 23 CE can be used as an underlay in:

- Laboratories & clean rooms
- Food and beverage production
- Electronics and electrical industry
- Pharmaceutical manufacturing
- Warehouses and storage areas
- Automotive manufacturing
- Textile and paper mills
- Chemical industry
- General medium duty industrial floors

### Features

- Economical underlay
- Seamless
- Self-smoothing
- Very low VOC
- Solvent free
- Excellent adhesion to cementitious substrates, marble, granite & mosaic tiles
- Tough & Hard wearing: durable with low maintenance cost

### PHYSICAL PROPERTIES

**R 23 CE as Primer** @ 27 ± 1°C  
(Part A + Part B)

Pot life	60 mins
Re-coat time	5 - 6 Hours
Bond strength	> 2.0 N/mm <sup>2</sup>

**R 23 CE as Topping** @ 27 ± 1°C  
(Part A + Part B + Part C)

Pot life	20 mins
Mixed density	approx. 2.10 g/cc
Initial hardness	6 hours
Foot Traffic	1 day
Light Traffic	3 days
Full Traffic	7 days

### Bond Strength

after 7 days	≥ 2 N/mm <sup>2</sup>
after 28 days	≥ 3 N/mm <sup>2</sup>

### Compressive strength

BS 6319 Part 2 (@28 days)	≥ 50 N/mm <sup>2</sup>
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### Flexural strength

BS 6319 Part 3 (@28 days)	≥ 10 N/mm <sup>2</sup>
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### Tensile strength

BS 6319 Part 7 (@28 days)	≥ 6 N/mm <sup>2</sup>
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### Shore D Hardness

ASTM D 2240 (@28 days)	≥ 80
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### Service Temperature

-30°C to +80°C

### VOC Content

13 g/L

### CHEMICAL RESISTANCE

Chemical spillages should always be wiped up as quickly as possible and not be allowed to concentrate up by evaporation.

### COVERAGE ESTIMATES

#### Pack Size

Component	82 Kg Set
Part A	4 kg
Part B	10 kg
Part C	17 kg X 4 bags

#### Coverage

As Primer  
(Part A + Part B) 1:2.5 by weight:  
200gms/sq.m/coat

As Topping  
(Part A + Part B + Part C) 1:2.5:17 by weight:  
4.2 kgs/sq.m@ 2 mm thickness

### APPLICATION INSTRUCTIONS

#### Surface Preparation

Note: The concrete substrate should have the minimum compressive strength of 25 N/mm<sup>2</sup> have a surface tensile adhesion strength of at least 1.5 N/mm<sup>2</sup>

The concrete substrate must be hard, sound, free of dust and other barrier materials such as paint, lime coatings, plaster, curing agents, laitance, oil, grease, wax, polish etc., that will inhibit adhesion to the substrate.

New concrete floors must be allowed to cure for at least 28 days and shall have an effective damp-proof membrane below to prevent rising dampness. Ensure that the moisture content is below 4% before commencing the work. Contaminated concrete

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surfaces should be mechanically prepared, by grinding, scarification, shot blasting or similar methods and be vacuum cleaned prior to installing R 23 CE. Overwatered or otherwise weak concrete surfaces must be suitably prepared down to sound, solid concrete by mechanical methods. Dust and other debris should be removed using vacuum equipment. In case of blowholes or voids in the floor it must be repaired with suitable repair materials

**Note:** Any joints in the base e.g. movement joints, should be brought through to the finished surface and suitably sealed.

### Priming

#### WPM 200 (for Marble, Granite, mosaic tile substrates)

(Mixing ratio: Part A 1 ltr + Part B 1 ltr)

The individual contents of WPM 200 should be thoroughly stirred before being mixed together. Take Part A and Part B in equal volumes and pour into a mixing vessel. Mix thoroughly with a spiral mixing paddle in a slow speed drill until a consistent homogenous mix is achieved and avoid excessive aeration during mixing. Only mix as much as may be used within the pot life (4 hrs @ 25°C) of the product. Apply WPM 200 using a brush or roller. Second coat of WPM 200 may be required depending on surface porosity and should be applied after 90 minutes.

#### R 23 CE primer (for cementitious substrates)

(Mixing ratio: Part A 1 kg + Part B 2.5 kgs)

Two or more coats of primer may be required depending upon the condition and the porosity of the concrete substrate. Poorly primed surfaces may lead to blistering or pinholes in the cured system. The primer components must be stirred individually, mixed and applied within its pot life using a brush or roller. Ensure that R 23 CE Topping is laid only after 6 hours after application of the primer.

### R 23 CE as Topping

**Mixing:** (Mixing ratio: Part A 1 kg + Part B 2.5 kgs + Part C 17 kgs)

The individual components (Part A & Part B) should be shook thoroughly before being mixed together. Pour Part A and Part B into a mixing vessel and mix thoroughly until a uniform mix is achieved. Gradually add Part C to the same vessel together and mix (for approx. 3-5 mins.) until a consistent homogenous mix is achieved. Once mixed, the R 23 CE will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk. Ensure that the mixed material is spread and finished within its working time.

### Application

The mixed R 23 CE material should be applied to the prepared and primed surface without delay using a trowel or depth set rake to achieve the desired thickness. As soon as the R 23 CE has been laid and as work progresses, the surface should be gently rolled with a spiked roller in order to release any entrapped air from the mix also to blend out any trowel marks. The work area should be protected during the installation process and during the initial curing time to ensure that no debris can contaminate the surface of the resin, as this will lead to unwanted blemishes in the hardened, cured surface.

### Subsequent Finishes

Application of subsequent finishes should commence after 24 hours after installation of R 23 CE.

### NOTE

R 23 CE should not be applied to floors that are known to have rising moisture or have relative humidity of greater than 75% at the time of application. Application should not be done in temperatures less than 10 C or where the ambient relative humidity is greater than 85%.

### CLEANING

R 23 CE can be removed from tools and equipment by using a suitable solvent after use. Any hardened material will need to be removed mechanically.

### STORAGE AND SHELF LIFE

R 23 CE has a shelf life of 12 months if kept in a dry, clean store between 5°C and 30°C in the original unopened containers. The product should be protected from frost, away from direct sunlight and sources of heat.

### PRECAUTIONS

During mixing and application the following precautions should be observed: Ensure adequate ventilation and avoid contact of the material with the eyes, nasal passages, mouth and unprotected skin. Avoid contact with the hands by wearing protective gloves and by using, if necessary, a suitable barrier cream. In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice and after contact with the skin wash immediately with plenty of soap and water. Prolonged contact with the skin should be avoided, especially where the user has an allergic reaction to resin-based materials. Always wear gloves and eye/face protection as necessary. Observe personal hygiene, particularly washing the hands after work has been completed or at any interruption whilst work is in progress. Care should be taken when removing gloves to avoid contaminating the insides. In case of accidents seek medical advice.

### DISPOSAL/SPILLAGE

Spillage of any of the product components should be absorbed onto sand or other inert materials and transferred to a suitable disposable vessel. Disposal of such spillage or empty packaging should be in accordance with local waste disposal authority regulations.

For further information please refer to the Material Safety Data Sheet.

### CONDITIONS OF SALE

Sold subject to the Company's conditions of sale which are available on request.

### NOTE

The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this

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information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

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