NCC X-CALIBUR CONSTRUCTION CHEMISTRY

Technical Data Sheet

X-Shield Bugfill 3K

High strength epoxy mortar

Product Description

X-Shield Bugfill 3K is a three component high strength epoxy mortar for the repair of concrete. It can also be used as a lining mortar

Advantages

- High early strength
- Abrasion resistant
- Compatible with concrete
- Can be applied to steel
- Easy to finish
- Chemical resistant
- Impermeable

Laboratory Test Data

All tests carried out at 28 days in accordance with BS 6319 at 20°C.

Property	Typical Results
Compressive strength	>70MPa
Flexural strength	>25MPa

Application Properties

Pot life	20°C 60 mins 30°C 30 mins
Application temperature	5 to 35°C
Thickness	5 to 50mm per layer (Horizontal) 5 to 12mm per layer (Vertical)
Initial cure	6 to 12 hours (temperature dependant)

Chemical Resistance

17.5% hydrochloric acid	R(CC)
10% nitric acid	R(CC)
10% sulphuric acid	R(CC)
10% acetic acid	R
Gasoline	R
Diesel	R

R = Resistant CC = Colour change only

These test results were obtained using 7 day old cured specimens immersed in the chemical agent for 10 days at 25°C; those results coded R or R(CC) indicate long term resistance.

Pack Size

10 Kg Pack

Shelf Life

24 months when stored in cool dry conditions in unopened packs.

Installation Guidelines

NCC X-Calibur provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting work. The information below is a summary intended for guidance only.

Surface Preparation

All substrates must be structurally sound, free from contaminants, such as oil, grease and traces of other coatings, and should be suitably textured to provide mechanical key; this may be achieved by scabbling or needle gunning. Corroded steel substrates should be grit blasted to BS 7079: Part A1 (equivalent to SA$2^1/_2$) followed by degreasing with a suitable solvent (e.g. X-Shield Solvent) immediately prior to priming. When corrosion is absent, wire brushing to a clean bright surface may be adequate but care must be taken to ensure the surface is sufficiently rough to receive the mortar after priming.

Priming

The prepared surface should be primed with X-Shield SF Primer. The contents of the hardener should be emptied into the base component and stirred with a spatula until the product appears uniform. The mixed primer should then be applied to the prepared substrate by a stiff brush at 10 to 15m^2 per liter. Allow the primer to become tack free prior to the application of mortar. If the primer appears to be absorbed into the surface easily, it will be necessary to apply a second coat once the initial coat is tack free.

Mixing
Mix in a static blade mixer such as the Pennine GP or Creteangle or with a heavy duty slow speed drill and X-Roc Mortar Mixing Paddle. The resin and hardener units should be premixed in the mixer for one minute followed by the slow addition of the filler with further mixing until uniform (approximately three to five minutes).

Application
Apply to the tacky primed surface using a steel trowel or by gloved hand and press firmly into position. On vertical surfaces, build up in layers, scratching each layer and allowing it to cure before applying the next layer. Each new layer should be primed as described above. Trowel smooth finish with a steel float and a small amount of X-Shield Solvent. Where a more textured finish is required use a plastic or wooden float.

Clean Up

Use X-Shield Solvent to remove uncured primer and mortar and to clean tools and equipment. Cured primer and mortar can only be removed mechanically.

Limitations
Not resistant to sustained contact with phenols, cresols, formic acid, ethyl acetate and related solvent esters, acetone and other ketones, chloroform and other halogenated hydrocarbon solvents.
Do not hand mix.
Apply only to a primed tacky surface or
May change color when used in direct sunlight.
Do not dispose of into the water system.

Health and Safety
This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website www.ncc.com.eg

Authorized Technical Specialist
Please note that only NCC X-Calibur Authorized Technical Specialists ('ATSs') are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product. Visit www.ncc.com.eg for a full list of NCC X-Calibur ATSs.

Datasheet Validity
NCC X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on www.ncc.com.eg to ensure you have the latest version.

Warranties
NCC X-Calibur supplies products that comply with the properties shown on the current datasheets. In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. NCC X-Calibur does not warrant or guarantee the installation of the products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to NCC X-Calibur in writing within five working days of being detected. NCC X-Calibur Construction Chemicals **makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties express or implied.** NCC X-Calibur Construction Chemicals shall not be liable for damages of any sort including remote or consequential damages, down time, or delay.