DuroPoxy Binder

General Purpose Epoxy Mortar Binder

Technical Data Sheet

DESCRIPTION

DuroPoxy Binder is an excellent product that is truly versatile. It is truly good technology ready for saving cost and creating leverage in your current based markets. The general-purpose binder has a wide variety of applications. This multi go to application allows epoxy to be used in a wide variety of application.

A solvent less binder to be used with sands and as a concrete binder designed for applications for structural integrity. This is low viscosity, hydrophobic (bonds to wet surfaces) and hardening to form a hard surface with excellent adhesions, compressive strength and tensile strength and creates resistance to the entry of water.

FEATURES:

- One product – creates many solutions
- 100% solvent free
- Low temperature cure
- Extended working time
- Chemical resistance
- Excellent adhesion to damp or dry concrete
- Chemical resistant
- Excellent mechanical strength
- Extend time and suitable for aggregate mixtures

USES

- Repair and structural bonding of new to old concrete
- Repair of cracks in old concrete floors
- Grouts for bolts and support in concrete
- Coving applications
- Bonding steel to concrete- check this??

COMPONENT PROPERTIES

Property	Resin	Hardener
Appearance	Straw to amber colour liquid	Straw to amber colour liquid
Specific gravity g/cm3	1.16 ± 3	1.03 ± 3
Viscosity @ 25°C	910 ± 50	100 – 300 cps

MIXING AND CURING CONDITIONS:

Property	RESIN / HARDENER
Mix ratio by weight (resin/ weight)	100/50
Solids Content	100%
Mixed specific gravity	1.09 g/cm3
Work Time (150 grams) (hardener and resin)	16 ± 3 minutes @ 25°c
Tack free time, as a coating	6 to 8 hours at 25°C
Hardening Time	24 hours @ 25°C

TYPICAL PHYSICAL PROPERTIES:

Property	Method	RESIN / HARDENER/K5 Sand
Hardness	AS/NZS 1683.15	65 Shore D
Tensile Strength	AS/NZS 1683.11	>10 MPa
Compressive Strength	ASTM D1621-04	70 MPa

These values are typical properties and are not to be used for specification

APPLICATION:

Surface Preparation: Remove all loose, crumbly and drummy areas to be cleaned. Captive blast clean and or acid etch to expose firmly held aggregate. Remove all dust, oil and grease. Some dampness may be okay – not looking for great pools of water.

Not all surface preparations can be covered here. It is strongly recommended that an on the spot specification adhesion test be performed as part of the quality audit and assessment.

Mixing: Measure sufficient resin and hardener to be used in 30 minutes. Mix using a paddle and low speed power mixer. Ensure all the material on the sides and stirrer are incorporated. Take care to avoid air entrapment in the mix.

If extending the mix with wit Durosand K5 follow the guidelines below. Ensure care is taken to keep aggregate dry after opening.

RECOMMENDED QUANTITY AND CURE TIME FOR DUROPOXY BINDER / DUROSAND K5

Features	Binder / Durosand K5 (Aggregate mixture) ratio by volume	Cure Time (hrs) Substrate Temperature at 25°C
Free flowing grout	1:2	24 hrs
Flowable mortar	1:3	24 hrs
Coving mortar	1:4	24 hrs
Dry pack – self supporting	1:5	24 hrs

General purpose Duropoxy Binder can be used to repair damaged concrete and masonry structures. It can also be used for structural repair of spalled concrete and masonry.

Prime cleaned surfaces with DuroPoxy Primer 100.

Flowable Mortar: Prepare by mixing 1 volume part of DuroPoxy Binder with 3 volume parts of Durosand k5. Place this mortar mix over the primed areas and trowel to a smooth finish. Minimise the air content/entrapment. This mortar exhibits good adhesion. Remove splash and spatter from adjacent surface before hardening occurs.

Br sure to grind or sand back any mortar protrusions to a flat smooth finish before applying Duropoxy products.

Coving Mortar: Prepare by mixing 1 volume part of DuroPoxy Binder with 4 volume parts of Durosand K5.

How: Apply by trowel. The working time will vary depending on ambient conditions, quantity mixed and placed. Remove any splatter or splash from adjacent surfaces before hardening occurs.

Curing: Cure time will vary on the ambient and substrate temperature. The DuroPoxy Binder will cure to a tack free surface within 8 hours at 25°C. Protect the top from traffic and spillage for at least 24 hours. Full chemical and mechanical resistance is obtained after 7 days cure at 25^{O}C.

ESTIMATING DATA:

Coverage rate for Duropoxy Binder/Durosand K5 is approximately 3-6m^2/L

PACKAGING and COLOUR AVAILABILITY:

Duropoxy Primer 100 is supplied as an 7.4L Kit (4.7L Resin / 2.7L Hardener). 8.1kg kit.
20kg Durosand K5 available on request.
Colour: Clear Amber

STORAGE:

Store in dry conditions between 10 to 30°C and away from sources of heat and naked flames. Protect from frost. When stored in original sealed containers, the minimum is 12 months shelf life.

CLEANING:

Clean the tools and equipment before hardening commences with rags, then wipe off using a solvent such as xylene before the resin system hardens. Do not use xylene for cleaning up hands.

PRECAUTIONS:

For the full health and safety hazard information and how to safely handle and use the product, please make sure that you obtain a copy MSDS. Avoid contact with skin and breathing vapour. Wear gloves and googles when mixing and using. Keep away from children. If swallowed DO NOT induce vomiting.

NOTE: The figures quoted for work time and tack free time and hardening time are not specifications. These figures will be job site dependent, with varying conditions etc. In all cases, use the numbers as a helpful guide.

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