Technical Data Sheet

Date July 2014
Replaces May 2009

K80
POURABLE EPOXY GROUT

Based on Nuplex Epoxy Technology

DESCRIPTION:
K80 pourable grout is a fluid, high quality, high-strength epoxy. It can be readily mixed and poured in vertical holes or rolled onto flat beds for slab bonding.
(use k125 for horizontal holes).

FEATURES

- Excellent adhesion to wet and dry concrete
- Fluid
- High adhesion
- Cure above 5°C (winter grade)

BENEFITS

- Tolerant to all site conditions. Wet slabs may be poured on top.
- Flows in to small crevices
- Bonds to metal, concrete, timber
- All season use

NORMAL END USES:

- Grouting bolts and starters
- Bonding rebar in piles (pile splicing)
- Bonding new to old concrete
- Machine bedding, pumpable grout.
- Durable protective coating.
- Concrete Surface hardening and coating.
- Friable concrete surface reinforcing.

TYPICAL PROPERTIES:

	RESIN	HARDENER
Appearance:	Opaque beige liquid	Clear pale liquid
Specific Gravity:	1.80	1.0
Flash Point:	>100°C	>100°C
Shelf Life:	>24 months	>24 months
Pack Types:	1 litre, 4 litre kits 25kg resin and hardener (20Lts mixed)	
Storage:	Mild dry conditions.	

MIX RATIO:	**by weight**	**by volume**
Resin/Hardener	100 / 12	100 / 20

POT LIFE:	**@ 12°C**	**@ 15°C**	**@ 20°C**
(Usable Life)	100 minutes	45 minutes	30 minutes
Accelerated	20 minutes	15 minutes	12 minutes

Caution: pot life is based on 100gram samples. Large quantities of mixed epoxy will generate heat and the pot life may be significantly reduced.

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CURE TIME: Concrete failure @ 12 hours @ 5°C, 6 hours @ 23°C .
Can achieve cure in 2 hours with accelerated version.

COVERAGE: Use by volume as required (0.001m³ = 1Lt)
SURFACE PREPARATION: Concrete: Acid etch, shot blast, grind
clean and free from oil and dirt
Metals: Grind to clean, bright surface

MIXING INSTRUCTIONS:
Carefully mix the product according to the stated mix ratio. The mix ratio is the only acceptable formula. Increased hardener levels result in a **weaker** product. Mix until uniform and no streakiness is evident.

Accelerated version: add accelerator as supplied by Nuplex (or may be supplied as pre-accelerated batches).
Refer Nuplex technical.

K80 may be extended with dried silica sand (max level 1lt sand per 2lts mixed K80). (Mixed SG 1.8 – 2.2).

APPLICATION:
Application temperature 10c. to 25c.
Application RH: less than 85%

1. **Bolt grouting**:
   Suitable for vertical holes. Blow hole clean with clean compressed air. Pour in mixed K80 and place bolt/bar. Vibrate to ensure full air release. (Use K125 for horizontal holes).

2. **New-to-Old concrete**:
   Mix well and spread over prepared old concrete (3m²/Lt depending on surface porosity). Dilute up to 10% with meths to aid brushability. The concrete must be applied whilst the K80 is still wet (2 hours @ 18°C).

3. **Concrete wear pad reinforcement**
   Mix K80 and add dried sand as specified. Trowel this into and onto the prepared concrete surface and cure.

4. **Protective Coating**
   For use as a coating / liner of pipes, troughs, effluent runs, concrete pads, traffic pads and bunds and tanks. K80 is a very hardwearing and durable coating. Its features of:
   - high bond strength to concrete,
   - bonding to a damp concrete surface and
   - Its good low temperature cure make it ideal for use as a coating in difficult environments.
   - It also displays very good surface hardness and resistance to abrasion so that fast flowing liquids containing particulate matter will not readily wear away the K80.

   Chemical Resistance:
   - Complete resistance to Hydrogen Sulphide in both liquid and gas phase.
   - Resistant to dilute acids and alkalis

   In these applications K80 can be mixed (do not add sand) and applied by brush or roller. Only thin coats may be applied without runs; however if appearance is not an issue then 2-3mm coatings may be applied. Otherwise normally brush or roll 2 coats at 2m²/lt/coat. Apply the two coats within 24hrs of each other. Work quickly as the material is rapid setting and once the set process has started K80 will rapidly gel and set.

   Concrete preparation: the restoration of an old concrete surface is dependant on good preparation. Grind, sandblast or very high pressure waterblast the concrete to expose fresh aggregate.
   Metals: grind to expose a clean surface

   If a trowelable mix is required to treat over-heads or verticals the please use K20 CRS system.

   Caution: K80 is very tough and hard but it is not flexible. It will fill non-moving joints but will not bridge actively moving joints.

Packaging:

- 1Lt Kit (resin & Hardener)
- 4Lt Kit (resin and Hardener)
- 20Lt unit : resin and hardener that will mix together in a 20lt pail.

HEALTH AND SAFETY:

Use gloves wherever possible. Wash hands with warm, soapy water after any skin contact. Re-seal all container tightly. Clean up with Solvent HA.
It is best to use disposable equipment

CURED PROPERTIES:

Maximum Operating Temperature:	70°C
Density kg/L:	1.2
Compressive Strength MPa:	70 - 90
Tensile Strength MPa:	30 - 40
Tensile Bond Strength MPa:	10 - 12
Flexural Strength:	35 - 40

OTHER EPOXY PRODUCTS:

K80	Pourable Grout	K214	General Purpose Adhesive
K102	Thick Mortar	K36	Clear Laminating Resin
K125	Paste	K78	Crack Repair
Fairing Cream	Sandable Smoothing Paste		
K106	Structural 24 hour Adhesive		
K219	Structural 5 minutes Adhesive		
K2005	High Peel Strength, Structural Adhesive		
K20 CRS	Trowel applied concrete protection & repair system		