



**Research & Applied Technologies**  
Suppliers of Waterproofing Systems & Facade Coatings

## Permafex® 1444

### Technical Data Sheet

**PERMAFLEX® 1444** is a solventless, non-sag epoxy mortar binder suitable for application on overhead, vertical or inclined surfaces. Because of its hydrophobic nature, it can be used in damp or wet conditions. **PERMAFLEX® 1444** combines the outstanding properties of a hydrophobic epoxy concrete binder with a fully thixotropic system.

**PERMAFLEX® 1444** can be applied in thick sections on vertical and overhead surfaces. It is suitable for application by brushing, knifing, trowelling and other techniques. The non-sag characteristic allows easy use for underwater application. **PERMAFLEX® 1444** may be combined with Tecrock™ Aggregate No 2 to prepare non-sag mortars.

#### APPLICATIONS FOR PERMAFLEX® 1444 INCLUDE:-

- Bonding new to old concrete on vertical surfaces.
- Preparation of thixotropic epoxy mortars for easier vertical and overhead repairs to concrete.
- Grouting bolts and anchors in vertical surfaces.
- Underwater and splash zone repairs.
- Bonding precast concrete units.
- Bonding steel and timber to concrete.

#### PROPERTIES UNCURED

Shelf life: .....2 years  
Appearance of hardener: .....Colourless liquid  
Appearance of compound: .....Grey paste  
Mixing proportions by weight or volume:  
.....1 hardener to 3 compound  
Solid content: .....100%  
v/v  
Work time: .....30 minutes at  
25oC  
Tack free time as coating.....6 hours at  
25oC  
Hardening time: .....24 hours at  
25oC

#### PROPERTIES CURED (7 days at 25oC)

Compressive strength, ultimate.....95Mpa  
Compressive modulus.....3.4Gpa  
Tensile Strength, ultimate.....62Mpa  
Bond Strength, new to old concrete:  
.....105% (University of Arizona Test)

All information is given in good faith but without warranty. No liability or responsibility will be accepted for any damage, loss or patent infringement resulting from use of this information. This information does not constitute a specimen.

Compressive strength .....85Mpa  
Tensile strength .....12Mpa  
Water permeability..... $2 \times 10^{-17}$ m/s

#### *Underwater and Splash Zone Repairs (PERMAFLEX® 1444/QA2 1:2 By Volume)*

Tensile bond strength, concrete.....2.4MPa  
(concrete failure)  
(placed and cured under sea water)  
*Compressive strength*.....  
.50MPa  
(placed and cured under sea water)

#### *Restoration Tests*

##### *PERMAFLEX® 1444/QA2 1:1 volume*

Concrete (compressive strength)  
Eroded pile.....71% of new pile  
PERMAFLEX® 1444 repaired pile .....113% of new  
pile

#### SURFACE PREPARATION

Remove all loose, crumbly and drummy areas to ensure a sound surface. As certain that the area to be bonded or repaired is free from dust, oil or grease.

#### PACK SIZES

PERMAFLEX® 1444 is available in 1 litre Kit. Each Kit contains hardener and compound in correct proportions for use.

#### SAFETY PRECAUTIONS

Avoid contact with skin and avoid breathing vapour. Wear gloves and goggles when mixing and using. Keep away from children. Provide adequate ventilation if applied in confined spaces. If poisoning occurs, call doctor or Poisons Information Centre. If swallowed, do NOT induce vomiting. Give plenty of water or milk. If skin contact occurs, remove any contaminated clothing and wash affected areas thoroughly with soap and water.

TDG Gode:- Hardener- UN1760, compound -not classified.

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