

# Megapoxy HELLAS<sup>®</sup>

## Technical Bulletin

### MEGAPOXY P1

Issue 2, 02/2005

### Gap filling epoxy paste adhesive for civil engineering use



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| <b>Summary</b>                  | MEGAPOXY P1 is a two component epoxy paste based on DGEBA epoxy resin and carbonate free filler. Easy to use, this product sets after mixing with excellent properties for a wide range of applications.  |
| <b>Recommended applications</b> | <b>BONDING</b> <ul style="list-style-type: none"><li>• Precast concrete articles</li><li>• Metal to metal or concrete</li><li>• Grouting bolts</li><li>• Natural stones</li><li>• Bricks and ceramics</li><li>• Bonding compressed cement sheet</li></ul> <b>FILLING &amp; REPAIR</b> <ul style="list-style-type: none"><li>• Concrete pipes and tanks</li><li>• Fibreglass articles</li><li>• Concrete floors and stairs</li><li>• Concrete columns</li><li>• In situ formed concrete</li><li>• Flush-filling countersunk screws in fibre cement sheet</li></ul> |
| <b>Availability</b>             | MEGAPOXY P1 is available in 4 Litre & 20 litre kits. Shelf life of unopened kits is 2 years minimum. The product should be stored in a cool, dry place.   |
| <b>Processing data</b>          | <ul style="list-style-type: none"><li>• <b>Mixing Ratio:</b> 1 part A to 1 part B by volume</li><li>• <b>Mixing:</b> Mix until uniform grey</li><li>• <b>Usable life at 25°C:</b> 60 minutes</li><li>• <b>Minimum cure time:</b> 24 Hours at 25°C</li><li>• <b>Full cure time:</b> 4 Days at 25°C</li><li>• <b>Minimum recommended application temperature:</b> 10°C</li></ul>  |
| <b>Mixing precautions</b>       | It is essential that the correct mixing ratio be used and that the part A and part B are thoroughly mixed together before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on aging.  |
| <b>Characteristics</b>          | <ul style="list-style-type: none"><li>• Simple 1:1 mixing ratio</li><li>• Creamy texture, blends easily</li><li>• Non-sag on vertical or overhead surfaces</li><li>• Adheres and cures under adverse conditions (cold &amp; damp)</li><li>• Good strength retention after prolonged immersion in water</li><li>• Very high strength permanent bonds</li><li>• Tensile and compressive strength superior to concrete</li><li>• Excellent chemical resistance</li></ul>   |

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#### Surface preparation

##### METALS

Metals should be grit blasted to clean surface. If this is not possible, mechanically abrade to clean bright metal surface and degrease by flooding the abraded surface with Megapoxy Thinners. Wire brushing is not entirely satisfactory and gives minimal adhesion only.

##### CONCRETE

Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitence. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square metre of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion concrete should be surface dry.

##### PAINTED SURFACES

Steps should be taken to remove all paint.

###### Metals

Good quality paint stripper should be used, followed by grit blasting.

###### Concrete

The surface may be either flame-cleaned, or mechanically treated with a scutching tool. Complete the preparation by grinding or scabbling.

#### Product specification

|                    | Part A            | Part B            |
|--------------------|-------------------|-------------------|
| <b>Consistency</b> | Thixotropic paste | Thixotropic paste |
| <b>Colour</b>      | White             | Black             |
| <b>Flash point</b> | >130°C            | >100°C            |

#### Typical cured properties

**Tensile strength:** 45 MPa  
**Tensile shear strength:** 14 MPa  
**Compressive strength:** 80 MPa  
**Flexural strength:** 18 MPa  
**Modulus of elasticity:** 2,000 MPa  
**Maximum operating temperature:** 80°C  
**Density:** 1.45 kg/litre  
**Dielectric strength 50 HZ at 25°C:** 190 Kv/cm

#### Cleaning up

To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to Safety data sheet.

#### Technical service

All purchasers of MEGAPOXY products are invited to avail themselves of our technical service on epoxy base materials. The methods and systems outlined in this bulletin are the best available at the present time, however continual research and development is being carried out and could result in change without prior notice.

Please do not hesitate to contact us, for any additional information.