

Humbond Epoxy Mortar

Easy-use filling mortar

Advantages

- **Simple mixing**
- **No shrinkage**
- **Easy blending**
- **High impact strength**
- **High strength permanent bonding**
- **Good chemical resistance** see over
- **No sag on vertical surfaces**
- **Durable**

Applications

Humbond epoxy is a specially formulated non-sag filling mortar. This easy-to-use two part product sets after mixing with excellent properties for the following applications:

Filling and repairs

Concrete pipes and tanks, floors and stairs, columns; and in-situ formed concrete.

Bonding

Precast concrete articles, concrete blocks, bricks and ceramics.

Specification

	<i>Resin</i>	<i>Hardener</i>
<i>Consistency:</i>	Thick Paste	Thick Paste
<i>Colour:</i>	White	Black
<i>Flash point:</i>	About 100°C	Above 100°C
<i>Shelf life:</i>	At least 1 year	At least 1 year

Surface Preparation

Metals:

Metals should be grit or sand blasted to clean surface, mechanically abraded and degreased. Wire brushing is not entirely satisfactory as it gives minimal adhesion only.

Concrete:

Concrete should be free from grease and oil, and if necessary cleaned with industrial grade degreasing agents. Once clean, laitence must be removed. This is best carried out by:

Mechanical abrasion - use a grinder, scabber or needle gun.

Painted Surfaces

All paint should be removed. With metals a proprietry brand paint stripper should be used. For concrete, the surface may be either flame cleaned or mechanically treated with a scutching tool.

Processing data

Mix ratio:

1 part resin to 1 part hardener by weight or volume. Do not use more or less hardener.

Usable life:

at 20°C: 500 gram mix - 25-35 mins

Minimum application temperature: 10°C

Coverage: 1 litre = m² @ 1mm thickness

1.9kg = m² @ 1mm thickness

Humbond is available in 1, 2 and 8 and 20 litre packs. (These are the mixed litre kit volumes).

Mixing resin and hardener

Both components should be thoroughly mixed prior to use to avoid areas of uncured material occurring in the casting. The correct mixing ratio must be observed in order to maintain optimum cured properties. If the mix ratio error is too great, the mixture may not cure satisfactorily. Water should not be used to assist mixing as it will greatly impair the cured properties.

Cured Properties

<i>Maximum operating temperature:</i>	65°C
<i>Tensile strength MPa:</i>	35-47.6
<i>Tensile shear strength MPa:</i>	9-10
<i>Compressive strength MPa</i>	75
<i>Flexural strength MPa:</i>	17-18
<i>Modulus of elasticity MPa:</i>	2x10 ³ to 2.2x10 ³
<i>Coefficient of linear expansion (mm/mm/°)</i>	(25-60) x10 ⁻⁶
<i>Water absorption: ASTM D570: 10 days @ 25 °C</i>	0-5-0.8% by weight
<i>Cure time: @15 °C</i>	24hrs

Potable water Contact:

Contact delay time with potable water after mixing.

Below 12°C

Refer note #1

Suitable

24 hrs

48hrs

Adhesion- Concrete

- PVC

- Polyethylene

- Polypropylene

- Timbers

Excellent

Excellent

Poor

Poor

Excellent

For bonding around Polyethylene & Polypropylene pipes use LM3000 followed by the use of Humebond if necessary.

Set Times (hrs)

@20°C

Initial set 2.5

Hard Set 5

Cured 24

@15°C

Initial set 4

Hard Set 7

Cured 24

If requirements differ to Humebond mortar in respect to faster cure, lower viscosity, colour and the like, Humes staff will be pleased to advise.

Chemical resistance

Cured Humebond is chemically inert and is resistant to a wide range of materials. These include
Acid water as found in sewage systems
Hydrogen Sulphide gases
Normal household wastes and cleaners.
Dilute alcohol.
Petrol & diesel

Exterior usage

Humebond is very stable in exterior exposure. The surface may dull off over time but the body of the material will be fully durable.

Hygiene

Epoxy resins, hardeners and accelerators are generally quite harmless to handle provided that certain precautions normally taken with chemicals are observed. Skin contact should be minimised, and nitrile rubber or plastic gloves are recommended.

The skin should be thoroughly cleaned at the end of each working period by washing with soap and warm water. (water and soap will remove Humebond) The use of solvents should be avoided. Disposable paper towels should be used to dry the skin.

Normal ventilation should be provided to the working area.

First aid

Contamination of the eyes by resin, hardener or mix should be treated immediately by bathing with clean, running water for 10 to 15 minutes, while medical advice is sought. Material splashed or smeared on the skin should be dabbed off and the affected area then washed and treated with cleansing cream. Medical advice should be sought in the event of severe irritation. Contaminated clothing should be changed.

Anyone taken ill after inhaling should be taken out of doors immediately.

In all cases of doubt, medical assistance should be sought.

Note #1 . **Potable water:** if the tank being mortared is for potable water. Take care to ensure the mix ratio is 1:1 and that the mortar is very uniformly mixed. Allow to cure and then wash and rinse out the tank prior to filling.
Suitable for potable water when mixed and cured correctly.

Producer Statement:

Nuplex operate manufacturing and supply in New Zealand to the ISO9001 international Standard.

Nuplex Industries Ltd state that Humebond epoxy mortar is suitable for the purpose as a concrete pipe jointing adhesive. It is suitable for permanent ground contact and immersion. The Building Act requires 50 year durability and Humebond complies with this requirement.

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