

Technical Product Data Sheet for **VARYBOND[®] Magic Bond**

Product description: A hand kneadable, speciality epoxy putty that mixes in 1 minute for permanent repairs to many substrates.

Features:

- Bonds to wet surfaces – even under water (fresh or salt water)
- Convenient stick – cut off only what you need
- Hardens in 10 minutes, back in service in an hour and full strength in 24 hours
- Easy to knead. Knead until green colour disappears
- Does not go yellow to UV exposure
- Bonds to Fibreglass, metal, wood, concrete, glass and ceramics

Recommended Applications:

- Repairing tanks, drums and containers
- Patching holes and gouges in pipes
- Stopping leaks quickly
- Repairing porosity holes in castings

Typical Properties: 7 days cured at 24°C

Colour:	Green/white (changes to white after mixing)
Viscosity	Putty / hand kneadable
Working Time @ 24°C	14 minutes
Compressive strength ASTM D695.....	83 N/mm ²
Adhesive Tensile Shear ASTM D1002.....	6.3 N/mm ²
Cured shore hardness ASTM D2240.....	75
Dielectric strength, kV/mm, ASTM D149	12
Solids.....	100%
Temperature resistance.....	Wet .. 49°C
.....	Dry ... 121°C

Chemical Resistance: 7 days room temperature cure (30 days immersion @ 24°C)

10% Sulphuric Acid	Fair
Toluene	Very good
10% Hydrochloric Acid	Fair
Ammonia	Very Good
Chlorinated Solvents	Very good
10% Sodium Hydroxide	Excellent
Methanol	Very good
Kerosene	Very good

Please consult ITW Varybond for other chemicals.

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Epoxies are very good in water, saturated salt solution, leaded gasoline, mineral spirits, ASTM #3 oil and propylene glycol. Epoxies are generally not recommended for long term exposure to concentrated acids and organic solvents

Application Information:

General Surface Preparation: Proper surface preparation is essential to a successful application. The following procedures should be considered:

- If surface is oily or greasy, use Varybond Fast Cleaner 2000 Spray/Cleaner Blend 300 to degrease the surface.
- Remove all paint, rust and grime from the surface by abrasive blasting or other mechanical techniques.
- Provide a "profile" on the metal surface by roughening the surface. This should be done ideally by grit blasting (8-40 mesh grit), or by grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. Do not 'feather edge' epoxy materials. Epoxy material must be 'locked in' by defined edges and a good 3 - 5 mil profile.
- Metal that has been handling sea water or other salt solutions should be grit blasted and high pressure water blasted and left overnight to allow any salts in the metal to 'sweat' to the surface. Repeat blasting may be required to 'sweat out' all the soluble salts. A test for chloride contamination should be performed prior to any epoxy application. The maximum soluble salts left on the substrate should be no more than 40 p.p.m. (parts per million).
- Chemical cleaning with Varybond Fast Cleaner 2000 Spray/Cleaner Blend 300 should follow all abrasive preparation. This will help to remove all traces of sandblasting, grit, oil, grease, dust or other foreign substances.
- Under cold working conditions, heating the repair area to 38°C - 43° C immediately before applying any of Varybond's Epoxies is recommended. This procedure dries off any moisture, contamination or solvents and assists the epoxy in achieving maximum adhesion to the substrate.
- All prepared surfaces should be repaired as soon as possible, to eliminate any changes or surface contaminants.

Mixing: Simply twist or cut off the required amount for the repair from stick. Then knead with your fingers until the green colour disappears. All green colour must be gone and a uniform pure white colour is left – approx. one minute.

Application: Apply the mixed epoxy to the surface to be repaired within 2 minutes of mixing. The mixed epoxy does not show much bond strength at this time, and can be kneaded or formed into any cracks or holes to be filled. When applying to a damp, wet surface or slow leaking area, work the material forcefully into the surface until the exothermic process starts and adhesion strength starts.

Cure: After 5-10 minutes the epoxy will harden and form a firm bond. Full cured strength is in 24 hours. For a smooth appearance of cured epoxy, hand rub the epoxy with water prior to hardening.

Storage & Shelf Life: Magic Bond Epoxy Putty should be stored in a cool, dry place when not used for a long period of time. A shelf life of 1 year from date of manufacture can be expected when stored at room temperature (22°C) in their original containers.

Commerzbank AG Pforzheim, BLZ 666 400 35, Konto 4 006 532

Amtsgericht Pforzheim, HRB 1377 M • Geschäftsführer: R. Dodge, H. D. Schlindwein, J. E. Thompson • UST-IdNr.: DE 183744810



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- Precaution:** For complete safety and handling information, please refer to the appropriate Material Safety Data Sheets prior to using this product.
- Warranty:** Varybond will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control we can accept no liability for the results obtained.

The details from this technical product information are based upon our current position of our knowledge, experiences and the legal requirements. They describe the utilization of our products under normal operating conditions, without the guaranteeing of any laid down characteristics. They do not release the user from the necessity of own examination and precautionary measures. Our guarantee warrants for the quality of the product, but does not cover the success and effects caused by its utilization, which are dependant upon a multitude of factors.

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