



HeliBond

Thixotropic, Cementitious, Non-Shrink Grout

HeliBond is a cementitious grout which is injected into slots or holes formed in brick and stone masonry as well as concrete, to bond metal components in place. During curing, HeliBond expands very slightly, compensating for the normal cement hydration shrinkage, to maintain a tight bond. HeliBond is the main bonding agent used in the Helibeam system.

DESCRIPTION

HeliBond is a high performance, non-gassing, thixotropic, cement based grout, suitable for injection with a hand or power applicator. HeliBond is supplied packed in a pail containing two packs of dry powder and two packs of liquid ready for mixing as a "set".

HeliBond has a low liquid to powder ratio providing a thixotropic grout which completely fills all voids into which it is injected and which develops its compressive strength rapidly. The formulation includes an expansive system to compensate for shrinkage in the hardened state.

HeliBond is suitable for bonding metal components into most common masonry-type substrates including brick, stone, pre-cast concrete, blocks, etc. It is important to make the correct size of slot/hole to ensure a good bond.

In general a minimum clearance of 2mm all round the component will be adequate but should be increased to overcome drill wander in deeper holes, 500mm+, or to accommodate highly absorbent substrates.

For Helifix bars and ties the following will generally apply.

Product Dia. (mm)	Slot width (mm)	Hole dia. (mm)
6	10	10-12
8	12	14-18
10	14	16-18

DIRECTIONS FOR USE

Preparation and Mixing

- Form the hole or slot into which the HeliBar, anchor, rebar etc. is to be bonded, ensuring the appropriate clearance is allowed, together with an adequate depth for good fixing.
- After slotting or drilling, the slot/hole should be cleaned of all loose material and flushed out with water for maximum bond strength. HeliPrimer WB may be applied to minimise liquid absorption.
- Mix the contents of a "Pack Set" (1 Powder and 1 Liquid pack) of HeliBond by adding the powder to the liquid in the pail provided. Stir thoroughly using a powered paddle mixer. Do not attempt to mix by hand as this is likely to lead to erratic results.

THE ENTIRE CONTENTS OF EACH PACK SET IS TO BE USED – NO PARTIAL MIXING AND NO EXTRA WATER TO BE ADDED.

Application

- Check the piston is a snug fit in the pointing gun cartridge and adjust in accordance with the pointing gun instructions.
- Load the mixture into the cartridge in the injection tool and inject into the slot or hole in a continuous operation. Typical working life of the mixture in the pail is around 2 hours with re-agitation. The cartridge should be emptied within 5 minutes. If the injection process is interrupted for any reason, empty any syringe contents back into the bucket and re-stir until it again reaches a smooth injectable consistency.

Note: Always agitate the mixture immediately prior to loading.

- Pointing may be carried out straight away.
- After use, clean all tools, mixers and containers with clean, fresh water.

Note: If the pail is to be used more than once, ensure that it is completely clean before loading fresh material.

Curing

Ideally, exposed areas of HeliBond should be cured for at least three days under damp conditions to gain full advantage of the shrinkage compensation elements in the formulation. The substrate should be kept moist and HeliPrimer WB may be applied to optimise the curing process.

RECOMMENDED TOOLING

- For injection into slots: Helifix Pointing Gun with mortar nozzle.
 - For injection into holes: Helifix Pointing Gun with pinning nozzle.
- Also available with pneumatic power.

PERFORMANCE DATA

Typical compressive strength development at 20°C, 50mm cubes cast under restraint, wet cured.

2 Days	7 Days	14 Days	21 Days	28 Days
15N/mm ²	25N/mm ²	30N/mm ²	40N/mm ²	45N/mm ²
2175psi	3625psi	4350psi	5800psi	6525psi

Unrestricted expansion when fully cured: Approx. 0.15%

STORAGE

HeliBond should be stored in dry conditions and in a temperature range of +5°C to +25°C max. Shelf life under normal conditions is 12 months. Pails may be stacked but not more than 4 high.

TEMPERATURE RANGE

In common with all Portland Cement products, HeliBond should not be used at temperatures below +5°C or if there is a danger of frost.

PACKAGING

HeliBond is supplied in a plastic pail, which may be used for mixing. The components are packed in two "pack-sets" each of which comprises a bag of powder and a liquid container.

HEALTH AND SAFETY

HeliBond contains Portland Cement and is therefore alkaline when wet. Unnecessary skin contact should be avoided. In case of eye contact, the eye must be irrigated with gently running clean, fresh water and medical attention sought. A separate Health & Safety Data sheet is available on request.

Important Note

Whilst all reasonable care is taken in compiling technical data on the Company's products, all recommendations or suggestions regarding the use of such products are made without guarantee, since the conditions of use are beyond the control of the Company. It is the customer's responsibility to satisfy himself that each product is fit for the purpose for which he intends to use it, that the actual conditions of use are suitable and that in the light of our continual research and development programme the information relating to each product has not been superseded.



Unit 24, 34-36 Ralph Street, Alexandria NSW 2015

Tel: 1300 66 7071 Fax: (02) 9669 1702

e-mail: sales@helifix.com.au web site: www.helifix.com.au