# DURAFIX

TECHNICAL DATA SHEET

Universal, High Performance, Methacrylate Epoxy Resin Based, Styrene Free, Anchoring Mortar

- Suitable for cracked and noncracked concrete C 20/25 to C 50/60
- High loading capacity
- Suitable for dry and water saturated concrete
- Large diameter applications
- Long working time at elevated temperatures
- Odourless epoxy

## Fields of Application

- Anchoring of rebar in preformed holes in concrete
- Fixing of anchoring bolts
- Fixing of bolts, screws and beaming plates
- Installation of bonded rebar/shear reinforcement
- Low temperature applications down to -5 °C n Fixing gates, blinds, antennas and other domestic uses

## Features and Benefits

- Easy to use, no mixing required
- Fast curing for quick installation
- Can be used in diamond drilled holes
- Applicable in slightly damp conditions
- For use with a standard silicon gun
- High adhesive power
- For medium and high load fixing
- High early and final mechanical strengths
- Can be used at low or high temperatures

## TECHNICAL DATA

| | |
|---|---|
| Specific Weight | 1.61 ± 0.03 gr / $cm^3$ |
| Surface dryness | 6 min. (23 °C 50% humidity) |
| Curing time | see the list below |
| Compressive Strength | 77,8 kN |
| Flexural Strength | 14 $N/mm^2$ |
| Reaction to Fire | Euro Class E |

## APPLICATION GUIDELINES

The performance, durability and safety of the installed product used for anchoring steel (rebar), bolts and screws strongly depends on the substrate, the dimensions of the element, the drilling and cleaning of holes, the substrate temperature and the type of anchoring bolt or bar.
It is therefore important that a proper structural assessment of the structural elements to be repaired is carried out by qualified engineers, and that the choice of products, anchor types etc. is based upon such assessment. Guideline information on performance data and dimensioning is given in the tables hereafter.

### (a) Surface Preparation

The substrate must be clean, structurally sound, and without substances which can have a negative effect on the adhesion of the chemical anchoring mortar. Concrete or mortars in which bolts or rods are to be fixed should be at least 28 days old. Holes can be made using diamond or hammer drilling machines. Depth and diameter of the holes should be determined by the substrate, effective loads and the diameter of the anchor bolts or rebars. The drilled holes need to be cleaned with round brushes and oil-free compressed air directly from a compressor or using special hand pumps. The



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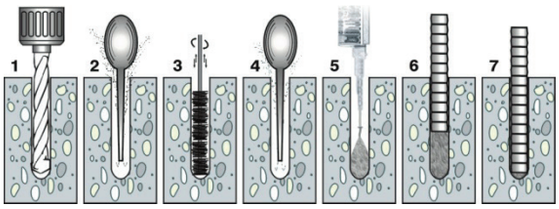
substrate can be damp, but must be without free standing water.

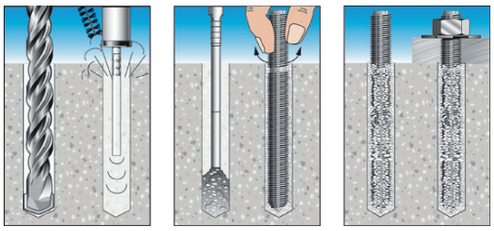



**(b) Mixing**
Durafix® is packed in ready to use plastic cartridges in different dimensions. It is advised to store the cartridges in a warmer environment if the material is to be used in cold conditions, since squeezing the Durafix® requires more effort with material temperatures below 0°C. Remove the sealing plug and fix the mixing unit onto the cartridge. Place the cartridge in the extrusion gun and squeeze. Do not use the first few centimetres of material, until the mixed material is of uniform colour. During longer application interruptions, remove the mixing unit and put back the sealing plug.

## APPLICATION

Anchoring in solid materials Insert the mixing unit of the Durafix® cartridge into the back of the hole and squeeze sufficient material while slowly pulling out. Ensure that no air is entrapped while filling the hole. Introduce the anchoring bolt or rebar by pressing and turning till the back of the hole is reached. An excess of material needs to be visible. Respect the waiting times as shown in the tables hereafter, before the anchors or rebars are exposed to loads.

Anchoring in Hollow Blocks Drill a 16 mm hole, clean the hole as mentioned above and insert the sleeve specially designed for this type of application. Close the gasket of this sleeve, press the mixing unit against this gasket and inject, without entrapping air, sufficient Durafix® for total anchoring. Introduce the anchoring bolt by pressing and turning till the back of the hole. Do not move the bolt before final setting of the Durafix®. Before tightening the anchors and exposing them to loads, respect the waiting times as shown in the tables hereafter.



## PACKAGING

Durafix® is available in cartridges of: 300 ml peel pack for standard silicon gun –
380 ml coaxial for special gun –

## STORAGE

Store at ambient temperatures, out of direct sunlight, in cool, dry warehouse conditions and clear of the ground on pallets protected from rainfall prior to application.

## SHELF LIFE

24 months if stored at above mentioned storage conditions.



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## Installation parameters and forces

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Anchor diameter | d | mm | M8 | M10 | M12 | M16 | M20 |
| Drill diameter | dB | mm | 10 | 12 | 14 | 18 | 24 |
| Drill depth | h | mm | 80 | 90 | 110 | 125 | 170 |
| Min. edge distance | cmin | mm | 40 | 50 | 60 | 70 | 90 |
| Min. axial distance | smin | mm | 80 | 90 | 110 | 125 | 170 |
| Tightening torque | T | Nm | 10 | 20 | 40 | 60 | 120 |
| Pull strength | NRd | kN | 6,6 | 9,9 | 14 | 15,7 | 26,3 |
| Shear strength | VRd | kN | 5,3 | 8,3 | 12,1 | 22,6 | 35,3 |

## Curing time

| Temperature | Open time - $T_{gel}$ | Curing time - $T_{cur}$ |
|---|---|---|
| +30 °C | 4 minutes | 35 minutes |
| +25 °C – +30 °C | 4 minutes | 40 minutes |
| +20 °C – +25 °C | 5 minutes | 50 minutes |
| +10 °C – +20 °C | 6 minutes | 85 minutes |
| +5 °C – +10 °C | 10 minutes | 145 minutes |
| +5 °C | 18 minutes | 145 minutes |
| –10 °C [1] [2] | 30 minutes | 24 hours |

[1] Minimum cartridge temperature: +5 °C

[2] This application is not covered by the scope of the product ETA or any other approval.



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