

## HFE-tec® PAV 360 two-component

**TWO-COMPONENT FIBRE-REINFORCED CEMENT-BASED FORMULATION WITH VERY HIGH FRACTURE ENERGY AND DUCTILITY**

**CE approved – Certificate n. 1305 - CPD - 0808  
EN 1504-3 Class R4**

**Description** HFE-tec® PAV 360 is a two-component cement-based premix (component A powder 25 Kg + component B liquid 3 Kg) specially formulated to obtain high mechanical resistances with exceptional values of fracture energy and ductility. HFE-tec® PAV 360 is used for horizontal or casted applications.

**Advantages and characteristics** HFE-tec® PAV 360 contains special polymeric fibres FIB-energy® with a very high elastic modulus (> 35 GPa), and does not contain steel fibres or metallic components.

Very high mechanical resistance, optimal adhesion to the support, strongly reduced shrinkage.

Exceptional value of fracture energy (37.500 N/m) together with the loading capacity and dynamic loads over a longer period of deformation.

**Application field** For repairs by horizontal applications or formwork subject to high static and dynamic loads, and in seismic areas:

Industrial floors, taxiing areas, belowground rail infrastructure, repairs of concrete in highly stressed environmental conditions.

**How to apply (for floors)** Note: support preparation by scarifying and the consequently good adhesion are fundamental for the durability of the repair with this mortar.

It is recommended to consult the Technical Sheet: "*Validation and preparation of substrates for an optimal adhesion of repair and strengthening mortars – recommendations for a correct finish*" and "*Validation and preparation of substrates for repair and refinishing of concrete floors*"

**Preparation of the surface:**

Each substrate must be sound, dry, and clean, without any dust, oil, greases or friable parts. The surface must be sufficiently rough for the adhesion: adequate blasting or scarifying is requested. Apply with a suitable brush a layer of about 1 mm of adhesion primer consisting of Component A and about 22% of Component B.

In case of thick or not uniform layers, it could be necessary to also use a steel mesh in this primer layer.

**Application:**

Add the powder to the liquid, mix HFE-tec® Pav 360 with a suitable mixer (vertical axes mixer or drill attached spiral mixer).

Mix until homogeneous, without lumps, with a specific weight of the mortar around 2260 gr/litre. Apply at least the same mixing times for the next batches.

Apply of the requested surface and spread with vibrating ruler or float.

Quartz size 0.3 ÷ 1 mm can be applied on the freshly applied HFE-tec®, serving both as curing compound and as anti-skid; with a broom, the excess quartz can be swept away.

The surfaces can also be finished with a helicopter (the movements (sliding) of the helicopter blades on the surface can be facilitated by using Component B mixed 1:1 with water).

After maximum 48 hours, cut the joints. We advice to foresee sufficient amount of component B.

**Remarks** Apply on sound and well prepared surface with adhesion values of  $\geq 1,5 \text{ N/mm}^2$  of direct traction. Do not apply at temperatures inferior to  $+ 5^\circ\text{C}$ .  
Respect the mixing proportions mentioned in this technical data sheet, as well as the mixing times to obtain optimal weight/litre of about 2260 gr/litre.  
Request an inspection of our technical support in case of difficult substrates or in case of uncertain interpretation.  
Read carefully the instructions mentioned on the labels of the packaging.  
Keep on building sites the same precautions for skin and eyes (glasses, gloves) used for normal cement mortars.

**Storage: INFORMATION ACCORDING TO 2003/53/CE:**

12 months in original packaging, not opened, maintained in dry and protected environment, at temperatures between  $+5^\circ\text{C}$  e  $+35^\circ\text{C}$ .  
Do not use the content of opened bags if you notice lumps of powder. Avoid the freezing of component B.

**Packaging** Bags on pallet of 1200 Kg + can

Component A powder 1 bag of 25 Kg + Component B liquid 1 can of 3 Kg
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Bigbag + barrel

Component A powder 1 bigbag of 1000 Kg + Component B liquid 1 barrel of 120 Kg
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Maximum aggregate size: 2,5 mm

Advised application thickness from 5 to 30 mm (for larger thickness, add 10÷20% of aggregate 3÷6mm).

**Technical characteristics (typical values)**  
(average values)

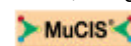
• Fracture energy	N/m	37500
• Compression resistance	$\text{N/mm}^2$	69 (28 days)
• Flexion resistance	$\text{N/mm}^2$	19 (28 days)
• Elastic modulus	$\text{N/mm}^2$	26.000 (28 days)
• Adhesion to concrete	$\text{N/mm}^2$	3 (28 days)
• Pull-out	$\text{N/mm}^2$	$> 20$ (28 days)
• Carbonation	8 years - mm	0,1
	18 years - mm	0,1
	25 years - mm	0,3
• CO <sub>2</sub> penetration resistance	$\mu$	16.500
• Water vapour transmission	$\mu$	73
• ① Freeze/thaw resistance	$\text{gr/m}^2$	250
• ② Chloride permeability	Coulomb	320
• Type of mortar		Low Thickness, high fracture energy
• N° of components		two
• Advised thickness	mm	5÷20
• Application		formwork/horizontal application
• Humid curing		NO
• Protected curing		SE
• Typical Application		HFE-tec® (see literature)
• Setting		normal
• Hardening		normal
• Shrinkage compensation		SI <sup>+++</sup>
• Consumption		2,28 $\text{Kg/m}^2/\text{mm}$

 Frost/thaw resistance in presence of salts SIA 162 11/91 ( $< 600 \text{ gr/m}^2 =$  high resistance)

 Chlorides permeability. FH WA RD/81 (100÷1000 COULOMB = low permeability)

 UNI 8148 restrained expansion

**SE** Depending on the applicative conditions (rain, sun, hot temperatures, humidity)

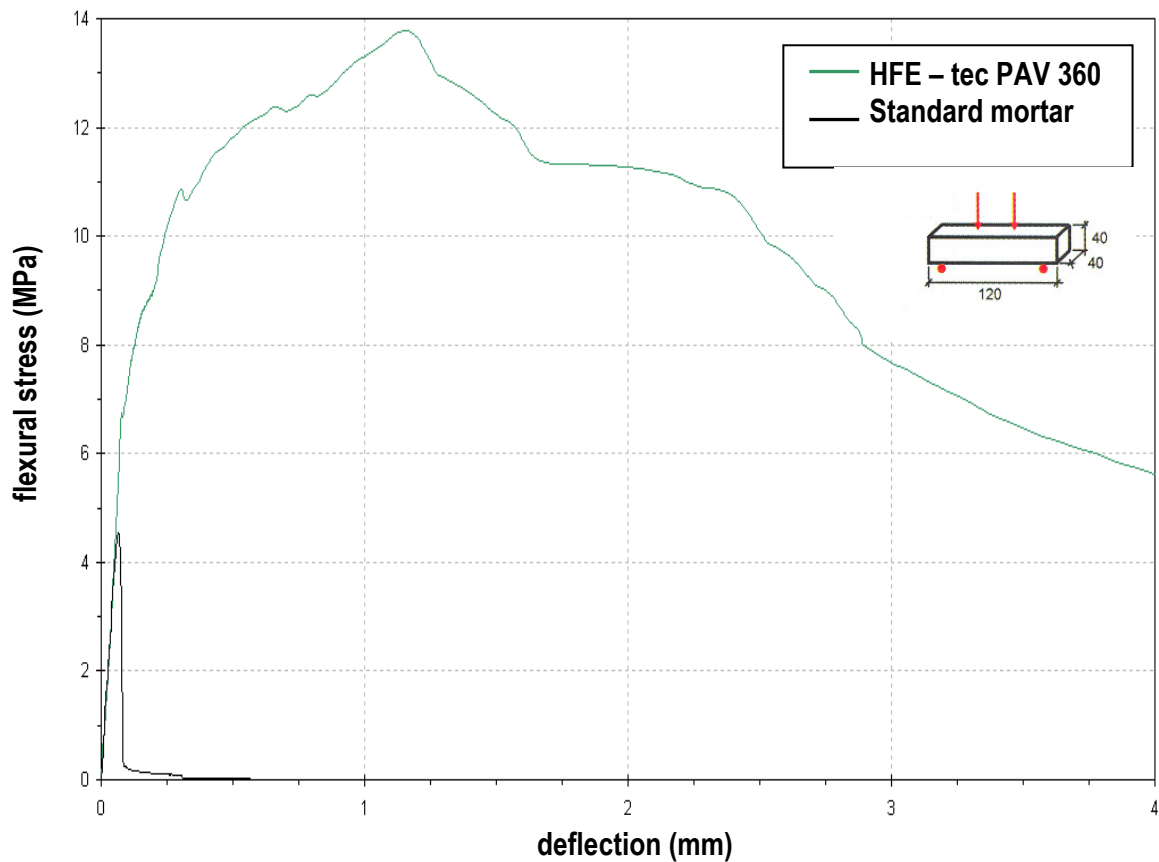


Multiple Corrosion Inhibiting Synergies



Very High Durability Repair & Prevention Systems

**AED** Very High Deformation Energy



**Safety indications** Follow the instructions and precautions as when working with standard cement based products. Read carefully the information of the packaging or consult the relevant Material Safety Datasheet.

The above data are based on our actual and most experienced practical and laboratory knowledge and the results are collected from application of the product in different situations. Tecnochem Italiana does not assume any responsibility regarding inadequate or negative performance as a result of improper use of the product or for defects deriving from factors or elements other than the quality of the product including improper storage. The technical characteristics and performance mentioned in this datasheet are updated periodically. The revision dates and number of revision of the datasheets are listed in the table below. Eventual variations are traceable on our website [www.tecnochem.it](http://www.tecnochem.it) where the most updated datasheets can be retrieved.