

Floorkrete EC

Elastomeric concrete

Description

Floorkrete EC is a PU based elastomeric concrete fast-repair compound recommended for quick runway repairs. It is a two component, cold curing system consisting of resin and hardener which when mixed with graded aggregates and fibres, cures to form a high strength polymeric, flexible concrete within hours. Floorkrete EC contains 1/8" chopped glass fibres.

Uses

- Pavement and highways
- Recommended for runway repairs

Key features

- Elastomeric
- Impact resistance
- Creates durable, long lasting repairs
- Anti spalling properties

- Higher load
- Resistance to jet fuels and aviation chemicals
- Return to service within 2 hours
- Self levelling

Properties

Type	: Cold cured polyurethane	Mixing ratio	: Pre-weighed kit
Pot life @ 27°C ASTM D 2471	: 15-20 minutes	Density of the mix	: 2.00 gm / cc
Return to service	: 90 - 120 min	Application	: By spatula or steel float
Recommended thinner	: PUT 502 (Clean up)	Shelf life	: 12 months in the unopened container

Performance data

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The mandatory performance parameters as per FeFRA and EFNARC guidelines for resin flooring system

Pull of Adhesion ASTM D 7234 - 2022	
To dry concrete	: Concrete failure
To wet concrete	: 2 - 3 N/mm ²
To steel	: 5 - 6 N/mm ²
Impact Resistance ASTM D 2794-1993	: 9.8 Joule
Abrasion resistance ASTM D 4060-2019 CS 17 Wheel - 1000 cycles	: Max 30 mg loss

Other mechanical properties

Compressive strength ASTM D 695	: > 35 MPa
Tensile strength ASTM D 638	: 8.5 N/mm ²
Elongation ASTM D 638	: 29 %
Flexural strength ASTM D 790	: 11 MPa
Hardness, Shore D ASTM D 2240	: 55
Scratch resistance IS 101, Part 5 / Sec-2	: Pass - 4 kg (No Rupture)

Note : The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary, dependent on actual site conditions

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Surface preparation : The concrete needs 28 days cure so as the residual moisture to reach within the acceptable level of 4-5%. Surface preparation like shot blasting or grinding is done in order to achieve a surface profile of 150-200 microns. The recommended surface profile is SP-2 (Reference: ICRI technical guideline No: 03732). The relative humidity in the concrete slab should not go beyond 80%.

Primer : Mix Duraprime 100 resin and hardner thoroughly in 4 : 1 ratio by weight, using a slow speed mixer. Apply the mixed material either by brush or roller. Allow primer to cure and apply sealant between 1 to 4 hours after priming.

Mixing and application of Floorkrete EC : Mix resin and hardener from the pre-weighed kit and agitate the mixture for 30 seconds. Add sand aggregates into the mixed solution and agitate for another 30 seconds. Pour the mix into the patch areas. Compact the repaired area by spatula or steel float. The patched area can be used within 2 hours.

Packaging & Theoretical coverage : Floorkrete EC is available in pre-weighed packs of 10.3 kgs and has a maximum shelf life of 12 months in the un-opened containers. Coverage : 2 kg / m² / mm.

Storage and handling

The product should be stored in accordance with national regulations. It should be kept in a cool, well ventilated area, away from heat, direct sunlight, sparks and children. It contains inflammable solvents. Handle with care. Mix resin and hardener as per the ratio. Use the mix solution within the pot life time.

Health and safety precautions

Please refer to MSDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. Incase of splashes on the skin, dampen the cloth with thinner PUT 503 and wipe the hands with the cloth. Wash then with soap and water. Dried film is non toxic. Incase of contact with eyes, rinse with plenty of water and seek medical advice. Incase of continuous exposure to vapour, the applicator should be immediately moved to get fresh air. The disposal of excess or waste material should be carried out in accordance with the local legislations.

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