

**Technical Data Sheet**

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VER : 01

TUFFKRETE MDF

# TUFFKRETE MDF

## High Strength Polyurethane Concrete Screed For 3 To 5 mm

### Product Description

TUFFKRETE MDF is a self-levelling, medium to heavy duty, solid colour, four-component, water dispersed polyurethane-based / cement and aggregate screeds designed to provide excellent resistance to abrasion, impact, chemical attack and other physical aggression. TUFFKRETE MDF has an aesthetic, easy to clean, smooth aggregate texture. The systems are typically installed at 3 to 5 mm thickness.

### Where to Use

Typically used in food processing plants, wet & dry process areas, freezers & coolers, dairies, breweries, wineries, distilleries, laboratories, chemical process plants, pulp and paper plants, warehouses and storage areas.



### Characteristics/ Advantages

Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents. Consult Jemkon Technical Sales for full details.  
Similar coefficient of thermal expansion to concrete allowing movement with the substrate through normal thermal cycling.  
It will perform and retain its physical characteristics through a wide temperature range from -15°C up to 70°C.  
Full steam cleaning.  
Bond strength in excess of the tensile strength of concrete, concrete will fail first.  
Non-taint, odourless.  
Behaves plastically under impact / deforms but will not crack or debond.  
High abrasion qualities result from its pure silica aggregate structure.  
Easily maintained.  
Solvent free.  
Fast cure.

### Appearance / Colour

Part A - resin:- Milky white, liquid  
Part B - hardener: -- Brown, liquid  
Part C – colour powder : colour as per Jemkon shade card.(Not supplied in set, to be procured separately)  
Part D - filler:- aggregate powder

Five standard colours are available (all are approximate):  
Beige, Yellow, Oxide Red, Green, Grey,

### Packaging

Set packaging.



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**Storage Conditions / Shelf Life** 12 months from date of production if stored in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.

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**Chemical Base** Polyurethane modified Cementitious mortar.

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**Density** Mixed density  
1.8 g/cc to 1.9 g/cc

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**Mechanical / Physical Properties**

<b>Compressive Strength</b>	24 h	20 MPa	ASTM C579
	7 days	40 MPa	
	28 days	45 MPa	

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**Flexural Resistance** 14.7 Mpa after 28 days cure at 27°C (EN ISO EN 196)

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**Abrasion Resistance** 0.07 g loss; CS-17 Wheel, 1,000 cycles ASTM D 4060

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**Adhesion** > 2.5 MPa (failure from concrete) (EN 1542)

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**Hardness, Shore D** 80-85 (ASTM D 2240)

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**Application Details**

**Consumption / Dosage** Self smoothing screed TUFFKRETE MDF ~ 1.8 to 1.9 kg/m2/ @ 1mm. 5.4 to 5.7 kg/ m2 for a 3 mm thick application.

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**Substrate Quality** The concrete substrate must be sound and of sufficient compressive Strength (minimum 25 N/mm2) with a minimum pull off strength of 1.5 N/mm2. If in doubt, apply a test area first.

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**Substrate Preparation** Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.  
Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed.  
Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate Jemkon products.  
High spots can be removed by grinding.  
All dust & loose material must be completely removed from all surfaces before application of the product, preferably by brush or vacuum.

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**Substrate Temperature** +8°C min. / +30°C max.

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**Mixing**

Mixing will be affected by temperature; condition materials for use to 18°C to 25°C. Stir Component A first for approx. 15 seconds. Add component B, and mix for approx. 60 seconds with low speed mixer. While mixing, add simultaneously but slowly (DON'T DUMP!) component C (powder) and Component D (pigment pack) within 15 seconds. Further mix for 2 minutes until the mixture is homogeneous and the pigment is uniformly dispersed.

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**Application Process & Tools**

Mix TUFFKRETE MDF & pour on the floor. Spread to the desired thickness using a notched squeegee, trowel or screed bar. Take care to spread newly mixed materials across the transition of previous applied mixes before the surface begins to set. Immediately spike roll the surface to release trapped air. Allow a minimum 14 hour cure period at 20°C before light traffic.

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**Recommended Undercoats & overcoats**

Primer : TECH 24 / TUFFKRETE MDF Scratch Coat  
Screed : -  
Sealer : -  
Top coat : TUFFKRETE MDF

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**Cleaning of Tools**

Clean all tools and application equipment with Jemkon Epoxy Thinner (ET 901) immediately after use.

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**Potlife**

Temperatures	Time
+25°C	~ 15 minutes

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**Waiting Time / Overcoating**

Substrate temperature	Waiting time	
	Minimum	Maximum
+25°C	24 hours	-

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## Curing Details

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### Applied Product ready for use

Substrate temperature	Waiting time	
	Minimum	Maximum
+25°C	24 hours	-

Note: Times are approximate and will be affected by changing Ambient and substrate conditions.

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### Cleaning/ Maintenance

Spillage of any kind should be cleaned quickly.  
Use mild detergent & water to clean the coating regularly.  
Scrubbing can be done by using soft bristles.

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### Value Base

All technical data stated in this Technical Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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### Health and Safety

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

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### Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Jemkon's products, are given in good faith based on Jemkon's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Jemkon's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Jemkon reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Technical Data Sheet for the product concerned, copies of which will be supplied on request.

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