

Heavy duty polyurethane hybrid flooring screed

DESCRIPTION

DUCRETE MF is a smooth, heavy-duty polyurethane concrete flooring screed designed for industrial environments requiring high mechanical strength, chemical resistance, and thermal shock resistance. It provides a seamless, hygienic, and durable surface suitable for heavy-duty applications with service temperature resistance ranging from -15°C to +90°C depending on system thickness.

RECOMMENDED USE

- Food & Beverage Processing Facilities
- Pharmaceutical Industries
- Hospitals and Healthcare Facilities
- Warehouses and Storage Areas
- Chemical and Engineering Industries
- Textile & any kinds of Industries
- Heavy-Duty Industrial Production Areas
- Commercial Kitchens and Cafeterias

FEATURES AND BENEFITS

- Excellent chemical resistance
- High impact and abrasion resistance
- High thermal shock resistance
- Wide service temperatures -15°C - +90°C
- Seamless hygienic surface
- Complies to HACCP requirements
- Odorless, non-tainting to food
- Solvent-free and low VOC
- Low emission

PACKAGING COMPONENTS

- **Part A (Resin):** Base liquid polymer providing primary binding properties.
- **Part B (Hardener):** Curing agent that reacts with the resin to create a durable and seamless finish.
- **Part C (Aggregate):** Specially graded fillers that provide thickness, strength, and impact resistance.
- **Part D (Colour Paste):** Pigment component used to achieve the desired floor color.

TECHNICAL DATA

Compressive Strength (DIN EN ISO 196/ASTM C109)	>50 N/ mm ²
Flexural strength (DIN EN ISO 196/ASTM C109)	>20 N/mm ²
Hardness Shore-A (EN ISO 868)	approx. D 80 (28d)
Fire classification	Bfl-S1 (EN 13501-1)
Water absorption coefficient (EN 1062-3)	w < 0.01 kg/m ² h 0.5
Solids content	99 %
Density (23°C)	1890 kg/ m ³
Viscosity (23°C)	7000 mPas
Packaging size (4-component)	20.00 kg (A+B+C+ Colour paste)
Storage Protect from frost!	Dry at 10–30°C, avoid direct sunlight

TECHNICAL DATA

Working time (23°C)	approx. 10-15 minutes
Application temperature:	10 – 35°C (min. 3°C above dew point)
Permitted rel. air humidity*	min. 40 % - max. 90 %
Material consumption (PU mortar)	1.9 kg/m ² per mm 5.7 – 7.6 kg/m ² for 3 -4 mm
Over coating (23°C)	within 12 - 24hours
Cure time to withstand*: Foot traffic Heavy traffic Exposure to chemical	after 12 – 20 hours after 2 days after 7 days

Statement of Responsibility (Disclaimer)

The technical information and application advice are based on present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a products suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

APPLICATION PROCEDURE

General

DUCON systems shall be applied in accordance with general application guidelines and should only be installed by trained and qualified personnel.

Surface Preparation

Concrete substrates shall be structurally sound, clean, dry, and free from dust, oil, grease, laitance, curing compounds, coatings, and any weak or loose materials. The substrate shall have a minimum pull-off strength of 1.5 N/mm² and should consist of monolithic reinforced concrete with a minimum strength class of C25/30 in accordance with EN 206-1 (excluding lightweight concrete), or cement screeds with a minimum classification of CT-C30-F4 and a minimum thickness of 25 mm.

DUCRETE MF shall always be applied to a properly prepared surface. Surface preparation should be carried out by diamond grinding, scarifying, or captive shot blasting to achieve the required profile for optimum mechanical bonding. Grooves with a minimum width of 3 mm and depth of 5 mm should be formed along the perimeter, around drains, columns, joints, and protrusions to ensure proper anchorage of the system.

Mixing Procedure

Prior to application, material temperature shall be conditioned to site conditions and maintained above +10°C. Add Part D (Colour Paste) into Part A (Resin) and mix for approximately 1 minute until a uniform colour is achieved. Add Part B (Hardener) and continue mixing for 1–2 minutes using a slow-speed electric mixer (minimum 300 rpm). Gradually add Part C (Aggregate) and continue mixing until a homogeneous and lump-free mixture is obtained.

Application of Wear Coat

Apply DUCRETE MF onto the prepared and primed surface using a notched trowel, spatula, or notched squeegee at the required thickness. Spread the material evenly to achieve a smooth and uniform finish.

De-aeration

Immediately after application, use a spike roller to remove entrapped air and ensure a seamless surface finish.

Over Coating

Over coating should be carried out within 12–24 hours after application. If the interval exceeds 24 hours, lightly grind the surface before applying subsequent coats.

Final Curing

Protect the applied surface from water, dust, and traffic during curing.

- Foot Traffic: 12–20 hours
- Heavy Traffic: 2 days
- Full Chemical Exposure: 7 days

Storage / Shelf Life

Store in a dry place, protected from direct sunlight and extreme temperatures. Shelf life, 24 months in unopened packaging under recommended storage conditions.

Precautions

Avoid contact with eyes and skin. Wear suitable gloves, eye protection, and other appropriate PPE during handling and application. Wash thoroughly after use and keep out of reach of children. Refer to MSDS/SDS for safety information.

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