### POLYURETHANE-CEMENT-BASED MORTAR RESISTANT TO IMPACT, SEVERE CHEMICAL ATTACK AND THERMAL SHOCK AND IDEAL FOR HIGHLY RESISTANT ANTI-SLIP HEAVY-DUTY INDUSTRIAL FLOORING

Ideal for areas subject to high traffic and frequent and prolonged contact with even aggressive and high-temperature liquids (up to 150°). Thickness from 6 to 12 mm.



**DURAFLOOR M** is a polyurethane-cement-based four-component waterborne colour mortar for highly resistant heavy-duty industrial flooring. Applied in 6 to 12mm thick layers, **DURAFLOOR M** is ideal for seamless heavy-duty industrial floors that are highly resistant to chemical attack, impact, abrasion, frequent washing, discharge and spillage of even aggressive liquids at a high temperature of up to 150°C.

## **ADVANTAGES**

DURAFLOOR M is a polyurethane-cement-based seamless flooring for industrial use. The coating has the following features:

- ✓ VERY HIGH CHEMICAL RESISTANCE: DURAFLOOR M is resistant to a wide range of chemicals used in industrial processes (see chemical resistance table).
- ✓ ANTISLIP: DURAFLOOR M ensures the floor is anti-slip even in case of water pooling.
- ✓ RESISTANT TO HIGH TEMPERATURES AND THERMAL SHOCK: if applied in a 6mm thick layer, DURAFLOOR M is completely resistant to the discharge and spillage of liquids up to 70°C, or up to 150°C if applied in a 12mm thick layer (it can be cleaned using steam cleaning). DURAFLOOR M can also be used in places where operating temperatures go down to − 40°C.
- ✓ EXCELLENT RESISTANCE TO MECHANICAL STRESS: DURAFLOOR M is resistant to heavy traffic, shocks, impact and abrasion.
- ✓ FAST INSTALLATION AND MINIMUM DOWNTIME: DURAFLOOR M is walkable after 8 hours from installation and becomes fully performing after 48 hours.
- ✓ HYGIENE AND EASE OF CLEANING: DURAFLOOR M floors inhibit the growth of bacteria, can withstand high-temperature washing and pressure washing in compliance with HACCP requirements for the food industry.
- ✓ RESISTANT TO MOISTURE: DURAFLOOR M tolerates the moisture of the substrate and therefore can be applied on surfaces that have not completely cured.
- ✓ WATERPROOF: DURAFLOOR M does not absorb water and is ideal also in case of industrial processes that cause water pooling, or produce purees and liquids, including aggressive ones.
- ✓ DURAFLOOR M complies with the requirements of the Consolidated Law on safety and health at work (Italian Legislative Decree 81/08 and subsequent amendments).



DRAC

FLOORING

HIGH PERFORMANCE POLYURETHANE-CEMENT-

**BASED SYSTEMS** 

LINE



## **USES**

**DURAFLOOR M is ideal as base coat for DURAFLOOR 6.12 system,** which is specifically intended for food, pharmaceutical and chemical industries and wet or dry industrial processes, plants subject to heavy traffic, where high resistance to chemicals, impact, liquid spillage and high-temperature washing, thermal shock and stresses is required, such as:

- slaughtering and meat processing, fish processing;
- dairy plants, canning factories and beverage production plants;
- chemical and pharmaceutical companies, labs, cold stores;
- food production and preparation industries generally subject to ISO standards and to Italian Legislative Decree 193/07 that enforces Regulation (EC) no. 852/2004 on the hygiene of foodstuffs (HACCP). Rev. 09-21 / Pag. 01/5



## SUBSTRATE PREPARATION

### SUBSTRATE REQUIREMENTS

Before applying DURAFLOOR M verify that the substrate has a pull-off strength of at least 1.5 MPa and compressive strength of 25 MPa.

### CLEANING

- Remove any loose concrete by either mechanical chipping or pressure washing, taking care not to damage the structures.
- Remove stains, efflorescence or soaked-in stains of oil, grease, paint, lime, dust, dirt etc.
- Remove any trace of dust, dirt or any residue which may cause the coating to come off.

### **REPAIR SMOOTHING AND LEVELLING**

#### EXISTING AND NEWLY INSTALLED CONCRETE SUBSTRATES OR RESIN COATINGS

Roughen the surface mechanically (shot-blasting or sanding) to reach the sound, compact concrete so as to enhance adhesion. Any hollows, holes or obvious irregularities must be restored with the two-component, shrinkage-compensated epoxy mortar for rapid repair of concrete floors PAVIFIX.

### NEWLY INSTALLED CONCRETE INDUSTRIAL FLOORING

Sand thoroughly to remove any non-absorbent surface film especially on concrete flooring newly installed by trowel. Suitably dimensioned slots must be made for anchoring (see DRACO GUIDE for DRACOFLOOR).

### PRIMING

After thoroughly preparing the substrate as indicated above, apply by roller a coat of DURAFLOOR PRIMER polyurethane-cement-based impregnation and adhesion booster resin (approx.  $0.3 \div 0.4 \text{ kg/m}^2$ ) to facilitate adhesion of subsequent resin coats.

### **MIX PREPARATION**

### **COMPONENT PREPARATION**

The three components must be at a temperature between +15 and +25°C.

Do not use only part of the components as this could cause errors in the mixing ratio, and result in incomplete or no hardening.

Premix the colour part before use. Add the hardener (PART B) to the colour resin (A+D) and mix using a low-speed agitator (300-400 rpm) for about 1-2 minutes until you get a homogeneous mix. Pour the mix into a rotary drum mixer and add the aggregate (PART C) little by little; mix for at least 3 minutes until the mix is smooth and free of lumps and has a uniform colour.

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## **COATING APPLICATION**

### **APPLICATION PROCEDURE**

Apply **DURAFLOOR M** on a clean substrate, after applying the primer, as indicated above. Once the primer has hardened, and however within 24 hours from the application of DURAFLOOR PRIMER, it is possible to apply **DURAFLOOR M**.

Pour the mix on the surface and use a squeegee or metal spatula to spread it. Then level to the desired thickness. Make sure that the slots made for anchoring are filled with material.

### PRECAUTIONS

- Make sure the substrate is solid, compact and with suitable mechanical strength.
- Read the safety data sheet before using the product.
- The substrate must be at a temperature of at least +5°C.
- Ideal temperature of application is between +15 and +25°C.
- The use of forced air ventilation to promote evaporation is recommended.
- Wear goggles and rubber gloves both during working and when cleaning tools.
- Clean your tools right after application using DILUENTE ECO.

### HOT WEATHER PRECAUTIONS

- Store DURAFLOOR M components in the shade
- Work in the mildest hours of the day.
- Do not work at ambient temperatures above 35°C.

## COLD WEATHER

- Store DURAFLOOR M in a frost-free place.
- Do not apply the product if temperature is below -5 °C.
- Start to work in the hottest hours of the day and however when ambient temperature is at least 5°C.

## **PACKAGING AND STORAGE**

**DURAFLOOR M** is packed in 29.70kg kits (A+B+C+D):

• 2.32 kg bag (A) + 2.22 kg bag (B) + 25.1 kg bag (C) + 0.45 kg colour part bag (D)

Do not store on the ground. Store the product in a dry and sheltered place at a temperature between +10°C and +30°C. Keep away from direct sunlight. Protect against frost. The resin and hardener components (PARTS A, B, D) keep their features unchanged for one year if properly stored in their original packaging, while PART C (aggregates) only for 6 months.

### **AVAILABLE COLOURS**



DURAFLOOR M may yellow on the surface, in particular when exposed to UV rays. Light colours are even more subject to yellowing. Some chemicals may stain or fade the surfaces depending on contact duration, temperature and type of chemical. However, this does not affect the chemical resistance and mechanical strength of the product.

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## **APPLICATION SPECIFICATIONS** 20°C - 65% R.H.

	DURAFLOOR M6 (6mm version): from -22°C to 85°C	
OPERATING TEMPERATURES	DURAFLOOR M9 (9mm version): from -44°C to 130°C	
	DURAFLOOR M12 (12mm version): from -44°C to 150°C	
WORKABILITY AT 20°C	20 minutes	
OPENING TO FOOT TRAFFIC	8 hours	
OPENING TO LIGHT TRAFFIC	24 hours	
OPENING TO HEAVY TRAFFIC	48 hours	
COMPLETE HARDENING	7 days	
	DURAFLOOR M6 (6mm version): 12-14 kg/m <sup>2</sup>	
THEORETICAL CONSUMPTION	DURAFLOOR M9 (9mm version): 18-20 kg/m <sup>2</sup>	
	DURAFLOOR M12 (12mm version): 24-26 kg/m <sup>2</sup>	

The data above are obtained from lab testing in a controlled environment.

Slip resistance could decrease due to wear, contaminating agents and incorrect maintenance.

## **CLEANING OF DURAFLOOR M FLOOR**

Regular and proper cleaning using adequate floor cleaners increases the life of the floor and keeps it unchanged over time, and also makes slip resistance stable. DURAFLOOR M can be easily cleaned with standard cleaning techniques and cleaners.

For more information on floor cleaning, refer to the INSTALLATION AND MAINTENANCE MANUAL of DURAFLOOR by DRACO SpA. DURAFLOOR M9 (9mm version) can be steam-cleaned.

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### PERFORMANCE CHARACTERISTICS Cert. no. LF07021-07031/19

<b>CAPILLARY ABSORPTION -</b> PERMEABILITY	UNI EN 1062-3	0.008 kg/m²·h <sup>0,5</sup>
COMPRESSIVE STRENGTH	UNI EN 13892-2	Class C50 (> 50 N/mm²)
FLEXURAL STRENGTH	UNI EN 13892-2	Class F10 (> 10 N/mm²)
FLEXURAL MODULUS	UNI EN ISO 178	2180 MPa (Class E2)
IMPACT RESISTANCE	UNI EN ISO 6272	IR20 (21 Nm)
WEAR RESISTANCE-BCA	UNI EN 13892-4	AR 0.5 (depth of wear 50 µm)
COEFFICIENT OF LINEAR THERMAL EXPANSION	UNI EN 1770	3.17·10 <sup>-5</sup> /°C
RESISTANCE TO NEGATIVE WATER PRESSURE	UNI EN 8298-8	250 kPa (2.5 bar)
WATER VAPOUR TRANSMISSION RATE - equivalent air layer thickness Sd	UNI EN ISO 7783-1	Thickn. 9-10mm: Sd < 11 m
BOND STRENGTH TO CONCRETE	UNI EN 13892-8	Class B2.0 (> 2 MPa)
SLIP/SKID RESISTANCE - Class I: wet floor test for internal pedestrian surfaces: units ≥40 - Class II: dry floor test for internal pedestrian surfaces: units ≥40	UNI EN 13036-4	Class I: 65 units Class II: 88 units
NON-SLIP PROPERTIES - Ramp test (inclined angle >35°)	DIN 51130	R13
REACTION-TO-FIRE CLASS	UNI EN 13501	E <sub>ft</sub>

#### Legal notes - SLCMP version of 01.03.2017

Draco Italiana s.p.a. has adopted the parameters indicated in this data sheet and the related standards for the calculation of the values and technical data contained herein.

Customers shall verify that this data sheet and the values indicated herein apply to their product batch and have not been superseded by later editions. If in doubt, verify that the sheet corresponds to the one available on the website **www.draco-edilizia.it** at the time the sales contract was executed and/or by previously contacting the Technical Department.

Any suggestions on the use of the Products provided by our personnel either orally or in writing upon the Customer's request do not constitute additional obligations to the purchase contract and do not imply a contractual obligation for the company. They are based on our experience and limited to the current state of practical and/or scientific knowledge. They are not binding for the client or for the installer. It is the Customer's responsibility to test our products and verify they are suitable for the type of application and use envisaged.

Due to the nature of the product, it is not possible to guarantee perfect colour consistency between batches. Nonetheless, this does not affect in any way the characteristics and performances of the product. It is recommended to use only paints from the same production batch on adjacent surfaces. To avoid any colour differences, check that colour is correct and of the same batch number before applying the product.

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Depending on the accuracy of the various laying phases, for which we their indications. This edition cancels and replaces the previous ones.

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