

DIACRETE HD

Self-sealing polyurethane screed system of 6 – 9 mm (0.24 – 0.35 in) of thickness

Self-sealing screed composed by five components, ideal for coating floors of food industries. The product is designed to be applied in extreme environments; it resists high and low temperatures, heavy impact and abrasion. *Diacrete HD* has also excellent wear and chemical resistance. It is applied by trowel in 6 – 9 mm (0.24 – 0.35 in) of thickness.

BENEFITS

- Excellent mechanical properties.
- High impact and abrasion resistance.
- Resistant to steam and hot water cleaning.
- Excellent resistance to organic acids.
- Slip resistance.
- It produces a surface without joints or cracks where bacteria can hide.
- High chemical resistance.
- Easy to clean, it does not need maintenance.

APPLICATION FIELDS

Diacrete HD is formulated to make floors of food industries without the use of primer. It can be used as a protective coating on new floors or for restoring damaged floors. The polyurethane screed can be applied on concrete, wood, tile or metal surfaces. It is not recommended the use of asphalt or painted surfaces.

YIELD

- 12.0 kg/m² for 6 mm of thickness.
2.46 lb/ft² for 0.24 inch of thickness.
- 16.0 kg/m² for 8 mm of thickness.
3.28 lb/ft² for 0.31 inch of thickness.
- 18.0 kg/m² for 9 mm of thickness.
3.69 lb/ft² for 0.35 inch of thickness.

COLOUR

Cream, green, grey, yellow and red.

PACKAGING

Package of 30 kg (66.14 lb) composed by:

- Part A 2.88 kg (6.35 lb) plastic bucket;
- Part B 3.00 kg (6.61 lb) plastic bucket;
- Part C1 13.42 kg (29.59 lb) plastic bucket;
- Part C2 (pigment) 0.7 kg (1.54 lb) plastic bag;
- Part D (aggregate) 10 kg (22.04 lb) plastic bag.

STORAGE

Store the product in its original containers tightly closed, away from sun, water, ice and kept at temperature between +5°C (41°F) and +35°C (95°F). Storage time: 12 months.

PREPARATION OF SUPPORT

- Proper preparation is critical to ensure an adequate bond.
- The support must be perfectly hardened, dry and resistant.
- The surface must be thoroughly clean, well consolidated, without debris or detaching parts, fats or oils.
- Substrate temperature must be between +5°C (41°F) and +35°C (95°F).
- In case of cement substrate of new construction, this must be completely dry and cured.
- Old ceramic flooring must be bonded to the support and must not present on the surface detaching parts such as greases, oils, waxes, chemical products, etc.
- If the support is painted, treated or very smooth, you must sand the surface to ensure good adhesion of the coating.
- For porous substrate use *WATstop* as primer (yield 0.6 kg/m² – 0.12 lb/ft²).

MIXING

1. Pour part B and part C2 (pigment) into a big bucket. Mix perfectly using a professional drill mixer with helical spinner for 30 seconds.
2. Add parts A and C1 and continue to mix for 30 seconds, and then add part D (aggregate).
3. For supports where the temperatures are lower than 15°C (59°F), dilute the product already mixed with 1 - 2% of solvent.
4. *Diacrete HD* has working time of approximately 10-15 minutes at 30°C (86°F). The working time will vary depending on temperature.



For application video, product page, safety data sheet and other information.

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Technical Data		
Features		Units
Yield	12.0 kg/m ² for 6 mm of thickness. 2.46 lb/ft ² for 0.24 inch of thickness. 16.0 kg/m ² for 8 mm of thickness. 3.28 lb/ft ² for 0.31 inch of thickness. 18.0 kg/m ² for 9 mm of thickness. 3.69 lb/ft ² for 0.35 inch of thickness.	kg/m ² lb/ft ²
Colour	cream, green, grey, yellow, red.	-
Thickness	6 – 9	mm
	0.24 – 0.35	in
Pot life at 30°C (86°F)	15	Minutes
Drying time (T=30°C - 86°F)	12 hours for food traffic. 24 hours for heavy vehicle accessible (fork lift). 5 days for fully chemical cure.	hours / days
Storage	12 months in original container and dry places	months
Packaging	30	kg
	66.14	lb

Final performances		Units	Regulations	Results
Compressive strength after 7 days	75.0	MPa = N/mm ²	ASTM C-579	-
	10877.83	lbf/in ²	-	
Tensile strength	15.0	MPa = N/mm ²	ASTM C-307	-
	2175.57	lbf/in ²	-	
Flexural strength	20.0	MPa = N/mm ²	ASTM C-580	-
	2900.75	lbf/in ²	-	
Hardness	80 - 84	-	ASTM C-2240	Shore D
Abrasion resistance (1000 cycle, load of 1 kg using H22 wheels)	25.0	mg	ASTM D4060 Taber Abrader	-
Thermal Expansion Coefficient [temperature range -20°C (-4°F) a +60°C (140°F)]	$\alpha >> 2.7 \times 10^{-5}$ per °C	-	ASTM E 381, ASTM D-696, ISO 11359	-
Bond strength	> 2.5	MPa = N/mm ²	ASTM C-4541	100% concrete failure
	> 362.59	lbf/in ²	-	
Impact resistance	> 160	in/lbs	ASTM C-4226	-
Water absorption	0%	-	ASTM C-413	-
Slip resistance	dry 100 wet 40	-	Pendulum Slip Test	-

The above data, even if carried out according to regulated test methods are indicative and may change varying the specific site conditions.

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APPLICATION

1. Material must be used immediately after mixing.
2. Pour the mixed product on the support and distribute it with toothed squeegee.
3. Compact and smooth *Diacrete HD* using V-notched hand trowel, without visible screws, in one or more coats in the right yield until reach a thickness of 6, 8, or 9 mm (0.24, 0.31 or 0.35 in).
4. After a maximum of 40 minutes, roll the product using a spiked roller for allows air to escape and for the aggregate to be pushed down allowing liquids to come to surface.
5. Allow to cure overnight.

DRYING TIME

At temperature of 30°C (86°F) the product drying time is:

- 12 hours for food traffic;
- 24 hours for heavy vehicle (forklift);
- 5 days for fully chemical cure.

Drying time is influenced by relative humidity level and by temperature and may change significantly.

SUGGESTIONS

- Do not apply at temperature lower than +5°C (41°F) or higher than +35°C (95°F).
- During the summer season apply the product in the cooler hours of the days.
- If used outside, do not apply it with imminent threat of rainwater or ice, in case of strong fog or relative humidity level higher than 70%.

- If any unusually long delay should arise, such as a break for lunch, it will be necessary to completely clean all tools before ceasing operation. This is extremely important. Doing this will prevent the later contamination of the new batches of *Diacrete HD* with particles of partially cured material when the mixing operation starts up again after the break. The presence of such particles would seriously affect the towelling and finishing of the floor.

CLEANING

Wash tools before hardening using toluene or xylene. Observe all fire and health precautions when handling or storing solvent.

SAFETY

For handling, see product safety data sheet.

Avoid contact of the parts A and B with the eyes and skin as they can cause irritation. In case of contact, immediately rinse with clean water for at least 15 minutes. See a doctor. Use waterproof gloves. Wash hands thoroughly with soap and water after use and before eating. Do not smoke.

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