DU CEM

NORMAL SETTING, HYDRAULIC BINDER FOR INTERIOR & EXTERIOR

Dubond DUCEM is a Eco-friendly, hydraulic, normal-setting, rapid-drying mineral binder for high-performance screeds and heat-radiant slabs, Dubond Ducem, mixed with inert materials of assorted grain size from 0 to 8 mm, creates screeds of high dimensional stability and constant moisture stability, guaranteeing the rapid safe laying of ceramic tiles after 24 hours and hardwood floors after just 5 days.

Green Building Rating

ECO FIVE

- Mineral ≥ 30%
- Low Emission
- Low Ecological Impact
- Health Care
- Water Based

Areas of Application

- For internal and external use
- Low water/cement ratio
- Mechanical performances superior to those of Portland cements
- High dimensional stability and long-lasting performance
- Prolonged workability both in the manual and mechanical laying
- Suitable for laying homogeneous tiles natural stone, hardwood floors and
- resilient materials using adhesives

Features & Benefits

- Hydraulic binder for screeds with normal setting and rapid drying, adherent screeds with thickness ≥ 20 mm and floating screeds with thickness ≥ 40 mm.

Covering materials

- Homogeneous tiles, ceramic tiles, klinker, cotto, glass and ceramic mosaic, of all types and formats.
- Natural stone, agglomerate materials, marbles, also subject to a high degree of deformation or sudden staining due to water absorption.
- Hardwood floors, rubber, PVC, linoleum, textiles.

Substrates

- Prefabricated or cast concrete subfloors, cement-based screeds, lightened concrete, sound and heat insulating panelboards
- Screeds for indoor/outdoor use, in domestic, commercial and industrial applications and for street furniture, also in areas subject to thermal shock and freezing, heat-radiant slabs

DUBOND™
BINDS BETTER ! BEAUTIFY !

Substrate & Method of application

The substrate must be dimensionally stable, clean, dry, free from any rising damp, without cracks free from dust and loose, crumbling parts and must present a degree of mechanical resistance suitable for its use. The screed to be covered must be desolidarised from all vertical elements by means of a band in deformable material with a thickness of 8-10 mm, along the entire height of the screed. The structural joints

Adherent screeds :

In the case of irregular substrates with screed thicknesses which are variable or in any case less than 40 mm it is advisable to prepare the substrate positioning, between the midpoint and lower third of the total thickness of the screed, an electro-welded 50 x 50 mm mesh of 2 mm, to be anchored to the substrate. To improve adhesion to the substrate apply a slurry key "wet on wet", prepared with 2.5 parts Dubond Ducem, 1 part concentrated, SBR latex and 1 part water.

Floating screeds:

When laying water-sensitive flooring or in the case of substrates with a risk of rising damp or which are not perfectly matured, it is indispensable to create a vapour barrier over the substrate (which should be smooth and free from rough parts) using sheets of polyethylene or PVC. The sheets should be laid overlapping one another by at least 20 cm, sealed with adhesive tape and turned up on the walls and vertical elements such as pillars to a height corresponding with the entire thickness of the screed.

Screeds on compressible substrates:

On lightened, low-density substrates or in the presence of layers also thin layers of thermal / acoustic insulating materials, provide forscreed thicknesses and possibly also reinforcement calculated on the basis of the deformability class of the materials mentioned.

Preparation

Dubond Ducem must be mixed with water and inert materials using tilting mixers, mobile concrete mixers, pressure or screw mixers, following the indicated water / Dubond Ducem mixing ratio, until a semi-dry consistency has been obtained, and using an inert filler, with assorted granulometry from 0 to 8 mm, free from residual traces of earth or dust, to create screeds with thicknesses between 25mm to 80 mm. With screeds of lesser or greater thickness use inert materials with a maximum granulometry equal to approximately 1⁄3 of the required thickness. The percentage of water may vary considerably depending on the humidity contained in the inert material, therefore it is advisable to start mixing the paste with a small quantity of water and gradually add the remaining part, until the optimum consistency has been obtained.

- For laying floors in ceramic and natural stone in residential and commercial buildings not subject to heavy foot traffic or concentrated loads, a dosage of Dubond Ducem equal to 200 kg/M^3 of inert filler is recommended.
- When laying hardwood floors for the same purposes the dosage of Dubond Ducem must be at least 250 kg/M^3.
- For uses different from those indicated and subject to heavy, concentrated loads, the proportion of Dubond Ducem must be calculated in each separate case, using the technical characteristics given in this data sheet.

Application

Dubond Ducem can be applied in a practical and secure manner following the traditional phases required to produce cement-based screeds:

1. Preparation of level belts,
2. Casting and compacting the paste,
3. Levelling and final smoothing with a manual spreader or by mechanical means.

The compacting phase is particularly important to ensure the highest levels of mechanical performance. The finish of the screed, carried out by moistening it with water and using a rotating steel disk, can result in the creation of a surface crust which is not very absorbent and will extend the drying time of the screed and worsen the performance of the adhesive.

Precautions & Limitations

- Do not use on deformable substrates without having previously calculated the degree of flexure and having provided for the necessary fractionizing joints on the screed, in adherence on concrete castings which have not yet fully cured
- Use in the recommended dosages
- Do not add other binders, additives or water to the mixture during the setting phase
- An excessive quantity of water and use of inert materials with a granulometric grading lower than that recommended or non-assorted, will reduce mechanical resistance and the rapidity of drying before laying hardwood floors and resilient materials, check residual humidity with a carbide hygrometer.
- Do not moisten on the screed once it has been created; protect from direct sunlight and air currents for the first 24 hours

Technical Information

Appearance	**Mixture of binders**
Shelf life	**12 months in the original packaging in dry environment**
Mixing water	**Up to 12 Lit / bag 25 kg**
Pot life	**>3 hours**
Temperature range for application	**from + 5°C to +45° C**
Fool traffic	**8 - 12 hours**

Waiting Time before laying

Ceramic tiles	**24 hours**
parquet	**5 days**
Coverage	**2-2.5 kg/M^2 per cm of thickness**

Final Characteristics

Compressive strength (binder):		
After 3 days	**≥ 40 MPa**	**EN 196/1**
After 7 days	**≥ 45 Mpa**	**EN 196/1**
After 28 days	**≥ 5 5MPa**	**EN 196/1**
Residual humidity (screed):		
After 24 hours	**≥ 3%**	
After 5 days	**≥ 2%**	

Coverage

Recommended dosage:

Laying tiles	200 kg/m^3 sand 0-8mm
Laying parquet	250 kg/m^3 sand 0-8mm

Packing

25 Kilogram Poly Bag

Shelf life & storage

12 months in original packing.

Health & saftey Precautions :

- During application wear protective clothing, gloves and eye goggles during application. Avoid product to contact eyes and skin.
- **Skin Contact:** Wash immediately with plenty of clean water, use kerosene or mineral turpentine when the product has dried.
- **Eye contact:** In the event of eye contact splash plenty of clean water immediately and seek medical advice.

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