APSE®
floor products since 1964

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UMIFOND 3C

THREE-COMPONENT EPOXY CEMENT PRIMER AND COATING FOR HUMID SUBSTRATES

DESCRIPTION

UMIFOND 3C is a low-thickness, three-component epoxy cementitious coating specially formulated for cementitious substrates, even humid ones.

FIELDS OF APPLICATION

UMIFOND 3C is particularly suitable for following applications:

- Primer for self-levelling cementitious coatings;
- Skimming as a waterproof and frost-proof layer;
- Waterproof coating for walls and floors, concrete tanks, industrial or fire-fighting water containment;
- Smoothing micro-cracks in concrete;
- Intermediate skim coat on damp substrates intended to receive subsequent resin coatings;
- Concrete structures, floors and walls, even if without a vapour barrier;
- Coating also for decorative floors.

UMIFOND 3C is applied in underground rooms with high humidity levels, even with water-saturated substrates, concrete pipes, freshly moulded concrete products, plaster skim coats, coatings and stoneware tile floors. Loaded with quartz sand, it forms a synthetic mortar for repairs and levelling without shrinkage, thixotropic, easily applied with a trowel and smoothable like a cement mortar.

PACKAGING

14 kg pre-dosed containers:
Comp. A = 5 kg plastic buckets
Comp. B = 2,5 kg plastic buckets
Comp. C = 6,5 kg plastic buckets

CONSUMPTION

250-300 g/m^2 per coat on non-absorbent surfaces;
400-500 g/m^2 per coat on absorbent surfaces;
1 kg/m^2 per per mm of thickness as a vapour barrier;
1,5 kg/m^2 per mm of thickness as a skim coat.

MIXING RATIO

The mixing ratio by weight is:
Comp. A : B : C = 5 : 2,5 : 6,5 kg

FEATURES AND BENEFITS

- UMIFOND 3C is suitable for preparing humid or wet surfaces, where it is able to cross-link perfectly, forming a dry substrate that is suitable for subsequent treatment, even with products that are very sensitive to humidity when fresh.
- UMIFOND 3C is particularly suitable for cementitious, masonry, stoneware or natural stone substrates. Its adhesion to wet cement is greater than the cohesion of the substrate itself.
- UMIFOND 3C has excellent waterproofing properties, even in the presence of negative pressure.
- Quick setting.
- Can be painted over with low, medium and high thickness epoxy, polyurethane and epoxy-polyurethane resins.
- Outdoors, indoors and vertical applications.
- UMIFOND 3C has good chemical resistance to bases and diluted acids; solvents and strong acids damage it.
- Good water impermeability.

CERTIFICATIONS

UMIFOND 3C meets the requirements of standard UNI EN 1504-2: concrete surface protection systems (DoP no. 476).
ISO 9001 certified quality management system (Certificate No. IT.17.0227.01.QMS).
APSE S.r.l. is an active member of CONPAVIPER.

ISO 9001 certiW CERTIFIED

CE EN 1504-2

SUBSTRATE PREPARATION

Surfaces must be flat, clean and free from dust, oil, grease, mud, loose particles, paint and anything else that could impair adhesion. Preparation can be carried out by sanding, shot blasting or milling, depending on the condition of the substrate. If necessary, heat the room before applying UMIFOND 3C so that the substrate also reaches a temperature of 10°C. Before applying UMIFOND 3C, thoroughly vacuum any dust from the surface.

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PRODUCT PREPARATION

Preparation for standard applications
With a drill set to low speed, pour component B into component A (catalyst) and mix until the mixture is homogeneous and even-coloured. Then slowly add component C (selected aggregates), mixing further until the mixture is homogeneous and lump-free.

Preparation for application as a vapour barrier (in case of new substrate, minimum 1 week after completing of floor)
Mix the pre-dosed component C (6.5 kg) with clean water (1.7 litres) and thoroughly stir. Adding water is not mandatory, but it reduces the thixotropy of the compound, making it easier to apply.
Mix the pre-dosed components A (5.0 kg) + B (2.5 kg) and stir.
Combine the two mixtures, stirring.
You can now proceed to add 0.1-0.3 silica sand to the mixture. (Maximum 3 kg per 14 kg of UMIFOND 3C).

Remark: for mixing, we recommend using a low-speed twin-screw mixer.

METHOD OF APPLICATION

The product should be applied with a roller or spatula in 2 coats: for the first coat, use approximately 2/3 of the mixture, while for the second coat, use the remaining 1/3.

Apply the product at temperatures between +15°C and +35°C.

CURING

Refer to the table below for drying times (at 20°C) and curing times.

Pot-life	60-90 minutes
Touch dry time	4-6 hours
Waiting time between first and second coat	4-6 hours
Walkability	24 hours
Complete curing	7 days

WARNINGS

- Do not use if the container is damaged;
- Do not apply UMIFOND 3C directly onto surfaces that are wet with surface water, onto dusty, crumbly and inconsistent substrates, or in the presence of bleeding;
- Do not apply UMIFOND 3C directly on anhydrite or gypsum-based substrates and existing cement or gypsum-based smoothing compounds;
- Do not apply UMIFOND 3C on cracks that may move, as the product is rigid and could therefore crack.

CLEANING OF TOOLS

Tools used for the preparation and application of UMIFOND 3C must be cleaned immediately after use with water, preferably lukewarm, after the product has hardened, removal can only be carried out mechanically.

HEALTH AND SAFETY

For information on safety regulations, hazard and precautionary statements, please refer to the latest safety data sheet, by request at:
ufficiotecnico@apsebg.it

STORAGE

Shelf life 12 months, if stored in original packaging, in a cool, dry place. Store at temperatures between +5°C and +35°C.
If frost or crystals form, heat the plastic containers in a bain-marie.

DISPOSAL

Dispose of contents and/or container in accordance with local regulations.

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PRODUCT TECHNICAL DATA

PHYSICAL CHARACTERISTICS (at +20°C)

FEATURE	STANDARD	RESULT		
		COMP. A	COMP. B	COMP.C
Appearance	-	Liquid	Liquid	Powder
Colour	-	White	White	White
Specific weight	EN ISO 2811-1	1,10 g/cm^3	1,30 g/cm^3	-
Viscosity	EN 8490	9000 cps	15000 cps	-

PHYSICAL CHARACTERISTICS OF THE MIXTURE (at +20°C)

FEATURE	STANDARD	RESULT
Colour	-	White-grey
Consistency of the mixture	-	Paste
Specific weight	EN ISO 2811-1	1,8 g/cm^3

PRODUCT PERFORMANCE IN OPERATION

FEATURE	STANDARD	RESULT
Compressive strength at 28 days	EN 13892-2	15-16 N/mm^2
Flexural strength at 28 days	EN 13892-2	2,7-3 N/mm^2
Water resistance against back pressure	EN 12390-8	Ca. 2 bar

PRODUCT PERFORMANCE ACCORDING TO EN 1504-2

FEATURE	STANDARD	RESULT
Water vapour permeability	EN ISO 7783	S_D > 50m
Capillary absorption and water permeability	EN 1062-3	W < 0,1 kg/m^{2}xh^{0,5}
Direct tensile adhesion strength	EN 1542	> 2,0 N/mm^2
Adhesion to wet concrete	EN 13578	No swelling, No cracking, No flaking. Adhesion ≥ 1,5 N/mm^2
Reaction to fire	EN 13501-1	F_{fl}