

MASTERTOP™ 1730

Water based, self smoothing, Matt finish, epoxy topping for medium duty traffic areas

Description

MASTERTOP 1730 is a four-component self-smoothing floor topping based on water based epoxy system, which on mixing yields a breathable, high performance, aesthetically pleasing floor coating. The finished coating exhibits very good resistance to common chemical spills and abrasion from high foot and tyre-wheeled traffic.

MASTERTOP 1730 is formulated for application on green or damp concrete as well as dry, set concrete. It is available in a range of eight standard colours and in custom colours with prior agreement.

Uses

MASTERTOP 1730 is the recommended floor protective coating in areas with raising dampness or on freshly laid floor concrete, where it will also help in curing of concrete. Application areas include:

- Hospitals, laboratories and medical clinics
- Clean rooms and aseptic areas
- Packing and storage areas
- Automotive assembly areas & showrooms
- Aircraft hangars & auxiliary areas
- Refurbishing water based epoxy floors

Advantages

- Water based - no fire hazard nor toxic fumes
- Can be laid on green concrete – avoids waiting time for concrete to cure.
- Seamless - can easily maintain hygienic condition.
- Breathable – excellent adhesion and finish despite raising dampness

Typical properties

Mixed density	: 1.85 kg/litre
Pot Life	: 40 mins at 25°C 20 mins at 40°C
Setting time/ foot traffic	: 12 hours at 25°C
Vehicular traffic	: 48 hours at 25°C
Maximum service temperature	: 60°C
Compressive strength (ASTM C579)	: 40 MPa at 7 days
Abrasion Resistance H22 wheel	: < 180 mg
(ASTM D4060,1000 cycles) CS17 wheel	: < 20 mg
Hardness, Shore D (ASTM D 2240)	: > 70
Adhesive bond strength to concrete (ASTM D4541)	: > 1.5 MPa (concrete failure)
Water vapour permeability, (DIN 52617)	: 6000 at 7 days

Specification Clause

The self-smoothing coating shall be MASTERTOP 1730, water based, 4-part system consisting of graded fillers to provide the toughness. The system shall consist of MASTERTOP 1700, water based epoxy primer and top coat of MASTERTOP 1730. Overall the system shall be able to offer good abrasion resistance; shall not exceeding wear loss of 0.2 mg/cycle when subjected to H22 test wheel on Taber apparatus as per ASTM C501. Also product shall have compressive strength minimum of 35 MPa at 7 days. The system shall offer hardness in excess of 70 on Shore D scale as per ASTM D2240. The product shall have water vapour transmission capability of 6000 when tested to DIN 52617.

Directions for use

MASTERTOP 1730 can be applied both on freshly placed green concrete and on existing concrete floors.

In either case, ensure that the concrete is of minimum M25 grade & the bond strength of the substrate must be at least 1.5 MPa.

Temperature Requirements

- Substrate temperatures: 15°C – 35°C
- Material temperatures: 15°C – 30°C

Very low or very hot temperatures will make application more difficult and careful consideration should be given to storage of materials. In the cold weather conditions, pre-condition materials by keeping it in a heated room. In hot weather conditions, some form of air-conditioned storage is required. Pre-conditioned materials at 20-25°C will reduce the possibilities of flash/slow setting and other defects.

Surface preparation

Green concrete: Finish the surface to a broom finish or light brush finish. Do not over trowel to a smooth sealed surface. Allow bleed water to evaporate before application of the floor coating.

Existing concrete: Floor surface should be sound and clean. Remove all surface laitance, oil, grease or any defective / weak concrete that will reduce the bond of the MASTERTOP 1730 to the substrate.

Grind down the surface high points and fill in the pits with MASTERTOP 1740.

Prepare the surface to a texture similar to medium grit sand paper using shot blasting, grinding or high pressure water jetting. Vacuum clean the surface.

For blemish free finish prime the surface to completely seal it using MASTERTOP 1700 PRIMER. Priming is a must on porous/ absorbent surface.

Pour the base completely into the Hardener. Mix using a slow-speed drilling machine fitted with a wing paddle or a paint stirrer. Apply onto the prepared surface at the rate of 5 - 8m²/kg using a roller or if the surface is absorbent with a stiff brush in a circular motion forcing the primer into the substrate. Allow it to dry. If the surface looks patchy due to absorption, apply one more coat of the primer.

Mixing

Mix mechanically, using a slow-speed drilling machine fitted with appropriate paddle – wing paddle or paint stirrer for mixing plain resin system and helical paddle for resin system with Aggregate component. During all mixing operations, ensure that the mixing head is totally immersed. Add the Colour Pack entirely to the Base and mix until the pigment is uniformly dispersed. Add the pigmented Base to Hardener and mix for 1-2 minutes. Then add the Aggregate component, whilst continuing to mix until the mixed material is lump free.

Placing

MASTERTOP 1730 can be applied to a thickness of 2mm to 4mm to a self-smoothing finish. When applied on to the freshly placed concrete, the texture will replicate that of concrete finish.

To achieve a smooth finish, it is necessary to have a flat, smooth substrate. Pour the mixed MASTERTOP 1730 over the substrate and spread with a notched trowel or a pin screed to the desired thickness (2mm to 4mm). Roll the coating with spiked roller to expel air and achieve a smooth finish. Ensure the applicator is wearing spiked shoes until the completion of the job. Rolling should continue until all air is released and a uniform colour is obtained.

Cleaning

Remove uncured MASTERTOP 1730 from tools and equipment using water before it sets.

Coverage

One 15kg pack of MASTERTOP 1730, on mixing, yields 8.1 litres.

Consumption depends on the finish required and the substrate texture. Each pack is sufficient for 3½ ~ 4 m² at 2 mm average thickness on a flat and smooth primed substrate including wastage.

Packaging

MASTERTOP 1730 is supplied in 15 kg packs.

Components

Base	1.34 Kg
Hardener	3.5 Kg
Aggregate	9.81 Kg
Colour pack	0.35 Kg

Storage and Shelf life

Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.

Shelf life is 4 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice please consult BASF's Technical Services Department.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue. Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

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BASF India Limited

Construction Chemicals Division

Plot No.37, Chandivali Farm Road, Chandivali, Andheri(East)

Mumbai – 400072 India

Tel: +91 22 28580200, Fax: +91 22 28478381

e-mail: basfcc@vsnl.net www.basf-cc.co.in

