

MASTERTOP®

1740

Multi component vapour permeable epoxy screed and repair compound

Description

MASTERTOP 1740 is a multi component system based on water dispersible epoxy resins, designed to provide continuous protection for concrete floors. Applied by trowel in thicknesses of 5mm and above, 1740 is suitable for use as a screed or repair medium.

Primary uses

MASTERTOP 1740 floors have excellent mechanical properties and offer superior abrasion and wear characteristics for areas subjected to heavy traffic.

MASTERTOP 1740 has good general chemical resistance, but as in all corrosive situations a full analysis of operating and exposure conditions is required, followed by reference to chemical resistance data, to ensure product suitability.

MASTERTOP 1740 may be used for general repairs in floors subject to heavy, abrasive traffic or where chemical resistance is required, for arris repairs or reinforcement of heavily trafficked joints. MASTERTOP 1740 is non-tainting and is suitable for application where foodstuffs are processed and stored.

In continuously wet areas, MASTERTOP 1740 floors offer improved safety by providing a slip resistant finish.

MASTERTOP 1740 may be used in the following industries:

- Food production and processing
- Vegetable and fruit canning
- Dairy products, bakeries and confectioners
- Chemical production and processing
- Textile production - bleaching and dying
- Metal processing and engineering

Advantages

- Vapour permeable
- Cures at 5°C
- Can be applied within 1 week of casting slab
- High mechanical strength
- Can be applied to damp substrate
- Impact and abrasion resistant
- Non tainting
- Excellent chemical resistance
- Water clean-up of tools

Packaging

- MASTERTOP 1740 is supplied as a multi component 30kg.
- MASTERTOP 1740 Primer is supplied in units of 2.8kg.

Typical properties*

- * Properties listed are only for guidance and are not a guarantee of performance.

• Pot life:	• 10°C	• 50 mins
•	• 20°C	• 40 mins
•	• 30°C	• 30 mins
• Applied density:	•	• 2000 kg/m ³
• Compressive strength	•	• 40N/mm ²
• (50mm cubes):		
• Flexural strength	•	• 17N/mm ²
• (BS 6319, Pt 3):		
• Slip resistance:	• Dry	• good
•	• Wet	• good
• Application thickness:	• Min.	• 5mm

Application procedure

Preparation:

MASTERTOP 1740 must be applied to a clean substrate free from dust, dirt, oil, grease and other contaminants. A clean well prepared surface will ensure adhesion between substrate and overlay.

The method of surface preparation will be dictated by the size of area to be treated, location and degree of contamination.

New construction:

The removal of laitance and contaminants is best achieved by mechanical means such as vacuum recovery shot blasting or scarifying.

Existing concrete:

All contamination must be removed and a sound, clean substrate exposed. Mechanical means of preparation are preferred followed by the removal of dust and other loose debris using an industrial vacuum or power washing.

In areas of deeply penetrating contamination by oils, greases and fats, hot compressed air, followed by

impregnation with a low viscosity sealer / primer is the recommended treatment.

Uneven concrete should be levelled to produce a smooth flat surface. For heavy wear situations a suitable repair mortar or epoxy screed from the EMACO or MASTERTOP ranges should be used.

Expansion, control and isolation joints in concrete substrates should be carried through MASTERTOP 1740 floors and filled with a suitable sealant from the Degussa range.

At all details where MASTERTOP 1740 systems will terminate, for example, at expansion, control or movement joints, at doorways, channels or columns, the material must be given a mechanical bond to the substrate using tie chasers. Tie chasers are grooves cut in existing concrete about 20mm deep and wide. Tie chasers can be cast during initial construction using polythene coated timber battens, or cut prior to surface preparation.

Prior to application MASTERTOP 1740 should be stored under cover in dry conditions and protected from extremes of temperature which may cause inconsistent workability, finish and cure times of the mixed material. Ideally, at least 24 hours before mixing, MASTERTOP 1740 should be maintained at approximately 20°C.

Priming:

Prime using MASTERTOP 1740 Primer.

Mix the two components using a slow speed drill with a suitable paddle. Mix for at least 1 minute or until a uniform consistency and colour are obtained. The components are preweighed and should not be split or divided.

MASTERTOP 1740 can be applied to a damp substrate, but all standing water must be removed prior to application.

Apply by brush or roller and work well into the surface. Apply according to the stated coverage. Apply the MASTERTOP 1740 whilst the primer coat is still tacky. If the primer hardens or is readily absorbed by the substrate, reprime before continuing.

Mixing:

Mixing should preferably be carried out using a forced action mixer such as a Creteangle, Pennine Casco or Cullomatic. A slow speed drill and spiral paddle is also suitable for single unit quantities.

Stir the base component thoroughly before use. Add the base, reactor and colour pack to the mixer and completely empty the contents of the containers. Mix for 1 minute or until a uniform colour is achieved. Slowly add the aggregate component and mix for a further 3 minutes until a uniform colour and consistency is achieved.

Mixing times should be varied according to temperature but typically 4 minutes is sufficient. It is important to maintain constant mixing times throughout the contract, to ensure consistent colour.

MASTERTOP 1740 systems are supplied in preweighed packs which should not be split or divided. It is important to use complete packs.

During application in cold weather, correct conditioning is essential, application should be halted if the ambient temperature is likely to fall below 5°C. Consideration should be given to the substrate or base slab as it is likely to be considerably colder than the surrounding air temperatures. When temperatures exceed 30°C, working times will be reduced significantly.

Where the finished floor is being used in a hygienic situation it is recommended to overcoat the MASTERTOP 1740 with a sealer coat. Consult Degussa-ME's Technical Services Department for further details.

Good curing is essential for resin-based materials to ensure specified performance. A minimum temperature of 5°C should be maintained during the curing period by the use of additional heating, if necessary.

Yield

Priming :

1kg covers approximately 4m²-5m²

Body coat:

A mixed 30kg unit yields 15 litres.

Equipment care

Remove uncured MASTERTOP 1740 using water immediately after use. Hardened material will have to be removed mechanically.

Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction of aggregate and protect from extremes of temperatures. In tropical climates the product must be stored in an air conditioned environment. Shelf life is more than 1 year 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 consult Degussa 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 is fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local Degussa representative.

Degussa reserves the right to have the true cause of any difficulty determined by accepted test methods.

Quality

All products produced by Degussa certified manufacturing facilities, are produced to conform to systems designed to meet internationally recognised quality standards.

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