flooring system

- Mastertop 20
- Mastertop 100
- Mastertop 504
- Mastertop 1105
- Mastertop 1110 T
- Mastertop 1210 Plus

- MASTERTOP® 20

Concrete hardening and dustproofing liquid

Description

MASTERTOP 20 is a colourless low viscosity liquid for application to concrete. It hardens and dustproofs the surface.

Typical applications

Hardening and dustproofing concrete floors or cement-based wearing screeds and pavings in:

- ☒ Factories.
- ☒ Garages.
- ☒ Industrial units.

Advantages

- Permanent treatment.
- New or old floors can be treated.
- Simple and easy to use.
- Used straight from the container.
- Economical.

Action

- By combining with the free lime produced during hydration of the cement, MASTERTOP 20 forms hard insoluble crystals thus binding the particles together and sealing the surface to form a hard non-dusting surface.

Composition

MASTERTOP 20 is an aqueous solution of sodium silicate plus surface active chemicals.

Packaging

MASTERTOP 20 is available in 210 litre containers.

Application procedure

Preparation:

Remove all oil, grease, etc. using a degreasing solution. Brush the floor with a hard broom or wire brush. Remove all dust and loose matter using a soft broom or industrial vacuum. If wetting of the floor has taken place during preparation it must be allowed to dry out before commencement of MASTERTOP 20 application.

Method of application:

Stir the MASTERTOP 20 before use. Pour evenly, or use a plastic watering can to sprinkle the MASTERTOP 20 liquid over the surface of the concrete. Then sweep the MASTERTOP 20 backwards and forwards over the floor to ensure even penetration. Any MASTERTOP 20 not totally absorbed into the surface should be removed by mops or squeegees before drying. 24 hours after initial treatment, apply a second coat in a similar manner (some floors may require three coats). 24 hours after the final coat, wash down the floor using clean water.

The floor may be walked on and used during the treatment period.

Watchpoints

New concrete:

New concrete should be allowed to cure fully (21 days minimum).

Dense floors:

Hard compacted / power floated surfaces may not have sufficient porosity to allow absorption of the MASTERTOP 20. Prior to treatment test for absorption of water. If concrete is absorbent, test a small area with neat MASTERTOP 20 and diluted MASTERTOP 20 to see whether penetration is achieved. Then proceed accordingly. If in doubt, ask for technical assistance from your Degussa representative.

Porous floors:

MASTERTOP 20 is not suitable for floors of high porosity. In such cases the use of MASTERKURE 181 should be considered.

Other precautions

Take care to protect glass, paintwork, brickwork, furnishings, etc., from splashes. Do not use MASTERTOP 20 on coloured concrete, brickwork or masonry.

Note: MASTERTOP 20 will not work on weak, friable or dusting concrete.

Coverage rate

As porosity and texture of concrete floors and cement pavings vary considerably, it is not possible to quote accurate coverage rates, but the following will provide a guide:

Tamped concrete: Approx. 3.5-5m² / ltr } two
Smooth concrete: Approx. 5-7m² / ltr } coats
Dense Power trowelled Approx. 9-10m² / ltr } 1 coat

Equipment care

All equipment should be washed in clean water immediately after use.

Specification clause

MASTERTOP 20

All concrete, granolithic and screed wearing surfaces shall receive two coats of MASTERTOP 20 colourless hardener and dustproofer as manufactured by Degussa, or similar approved, to the following specification:

Composition: A colourless, aqueous solution of sodium silicate plus surface active chemicals.

The liquid shall be applied strictly in accordance with the manufacturer's recommendations.

Storage

Store under cover out of direct sunlight and protect from extremes of temperature.

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

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.

02/2004 Degussa-IR

MASTERTOP® 100

Dry shake floor hardener

Description

MASTERTOP 100 is a pre-mixed, dry-shake surface hardener and has properties, which contains hydraulic binder and specially graded mineral aggregates.

Typical applications

Aircraft hangars.

- Basements and cellars.
- Mechanical workshops.
- Garage for light vehicles.
- Storage rooms.
- Corridors and halls.
- Parking areas.
- Loading platforms.

Limitations

- Not for use where operating and service conditions dictate the use of a metallic-aggregate surface hardener for greater abrasion and impact resistance.
- Not for use in areas exposed to acids and their salts or to materials known to rapidly attack or deteriorate Portland cement concrete.

Packaging

MASTERTOP 100 is packed in 25kg moisture-resistant bags.

Typical properties*

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

Hardness	7 (MOH Scale)
Average rate of abrasion (Dorry Abrasion Machine)	0.24 gms/min
Chemical resistance:	medium to low
Curing:	Required

Typical comparative wear tests results*

Depth of wear (thickness loss) (mm):

Sample reference	Control averag e	MASTERTO P 100 average
5 minutes	0.33	0.20
10 minutes	0.61	0.30
15 minutes	0.77	0.42
20 minutes	0.95	0.50
25 minutes	1.15	0.61
30 minutes	1.34	0.71
35 minutes	1.55	0.81

Weight loss (gm):

5 minutes	2.87	2.4
10 minutes	5.3	3.8
15 minutes	7.5	5.0
20 minutes	9.7	6.1
25 minutes	11.9	7.3
30 minutes	14.0	8.4
35 minutes	16.1	9.7

Tests results show that Mastertop 100 significantly reduces the depth of wear. Tests were undertaken using a Dorry Abrasion Machine.

Application procedure

Single Course Monolithic Floors:

The concrete:

Use a placeable and finishable concrete mix of the required mix design with a minimum slump of 75mm and no more than 3% entrained air.

In accordance with ACI 201 - 2R77 & ACI 302-1 R-89 a well proportioned Concrete Mix Design is essential. The concrete supplier should ensure that cement contents, w:c ratios, slumps are generally in accordance with the following minimum standard:

Cement (White OPC): Min 350 kg/m³
W:C ratio: Max. 0.50
Min. 0.40
Slump: Ideally 75mm
Strength: Min 31 N/mm²

Concrete should not segregate and bleed or contain more than 3% air. Do not use microsilica in the concrete as this can lead to problems with crusting when the dry shake is applied. Rheobuild or Pozzolith water reducing admixtures are recommended for concrete placement and optimum performance. Screeds to which MASTERTOP 100 is to be applied, should have a minimum thickness of 75mm. Following placement, concrete should be levelled off with a straightedge and then vibrated. The surface is then floated with a wooden float ensuring that it is not closed. Any bleed water should be removed. (Avoid sponge type absorbents). Thereafter sprinkle MASTERTOP 100 along edges of bays (approx. 80mm strips) where expansion and construction joints will be located. Float into surface using a wooden float.

MASTERTOP 100 is ideally applied to a surface which is neither too wet nor too dry. Ambient temperatures will dictate when the material is to be applied. Generally in temperatures of 35-45°C a waiting period

of 30-40 mins is recommended. This may need to be extended in temperatures of less than 35°C.

Using a raised trestle which spans the slab, the material is broadcast by hand onto the wet concrete surface. The application is carried out in two stages.

1. Apply two thirds of the required material to the concrete ensuring uniform distribution.
2. Allow applied material to absorb moisture from the concrete surface; a uniform darker colour will be apparent.
3. Using a wooden float, work MASTERTOP 100 into the concrete ensuring material becomes an integral part of the surface.
4. Apply the balance of material. Again wait until material has obtained a darker colour before floating with a wooden float.
5. When surface is sufficiently firm enough to take the weight of a man leaving only minor indentations, MASTERTOP 100 should be finished off by means of a power trowel. A smooth slip resistant finish can be obtained, but the surface should not be overworked.
6. If manual finishing with steel trowels is to be undertaken, this should take place before concrete becomes firm enough to take foot traffic.

- For heavy-duty traffic areas, concrete with a minimum strength of 30N/mm² should be used at 28 days. Thickness of the slab and the type and amount of reinforcement are important design considerations.
- To minimise shrinkage cracking, consider the use of Degussa water-reducing admixtures.

Do not use calcium chloride in concrete over which shakes containing metallic aggregate and/or colouring pigments will be applied.

- At temperatures over 29°C, at low humidity or when placing concrete without protection from wind or sun, erect sunshades or windbreaks the use of MASTERKURE curing products is essential.
- Do not use salt water or salt contaminated aggregate in concrete over which shakes containing metallic aggregate or colour will be applied.

Application rate:

- MASTERTOP 100 shall be applied at the following rates:
- Heavy duty 8-9kg/m²
- Medium duty 6-8kg/m²
- Light duty 4-6kg/m²

Curing:

- As soon the surface will not be marred by the application, apply the recommended curing compound for the type of surface and floor use involved:
-
- See separate product selection guide for curing compounds.

Notes:

For protection:

The area should be barricaded off after the curing compound is applied. As soon as the curing compound has dried, adequately cover the floor surface to prevent staining, discoloration or physical damage which may be difficult to correct. Alert other trades to the need for special protection against rolling or sliding heavy loads across the surface, oil drippings from pipe threaders, spillage of paint, plaster and mortar, acid washing of interior masonry walls, etc. Ensure that the covering is not damaged during the progress of the job.

Cleaning:

Clean with water as soon as the equipment is no longer used and before the cementitious material starts to harden on the blades, trowels, etc.

Sawing joints:

Saw the joints as soon as possible, without damaging the concrete.

Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction. Shelf life is 12 months in the tightly closed original packages 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's Technical Services Department.

Safety precautions

- Do not apply over concrete containing calcium chloride or aggregate contaminated with salt or saltwater.
- Do not apply over concrete containing microsilica.Do not apply over concrete containing more than 3% entrained air.
- This product contains cement which may cause irritation. Avoid contact with eyes and prolonged contact with skin. If contact occurs wash thoroughly with water and call a doctor. Keep product out of reach of children.

- For further information refer to the material safety data sheet.

Note

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

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Quality

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08/2005 Degussa-IR

MASTERTOP® 504

Flexible floor levelling compound

Description

A two component system comprising an acrylic polymer and cement based powder. The components are mixed on site to produce a self smoothing, flexible floor levelling compound which spreads easily on to suitably prepared substrates at up to 6mm thickness. Although thicker layers can be applied by adding extra aggregates depending on required thicknesses.

Specifically developed for use in temperatures ranging from 15°C to 60°C where added flexibility and adhesion are required.

Primary uses

To provide a durable, self smoothing floor surface which will protect the substrate from mild chemical attack and water penetration. For use as an underlay for carpets and tiles. Can be used as a light to medium duty floor when coated with epoxy based Mastertop.

Advantages

Self smoothing
Improved adhesion characteristics
Water resistant
Tensile strengths in excess of 160% of powder water mixes
- Improved flexibility
- Can be used on plywood or steel floors.
- Improved abrasion resistance
- Cushioning effect reduces fatigue and pedestrian noise.
- Supplied in pre-weighed units
- Easy to use
- Self curing
- Non dusting

Packaging

MASTERTOP 504 is supplied as a two component system of a liquid latex (3.875kg) and a grey powder base (25kg). Total pack size is 28.875kg. Yield is 16 litres.

Typical properties*

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

Colour	grey
Freezing point:	0°C
Coverage:	2.6kg per m² at a thickness of 1.5mm

Application procedure

Surface preparation:

The floor to be treated must be free from dust, loosely adhering material, plaster and cement droppings, grease, oil and paint, etc.

Large, spalled areas, cracks and pot holes should be raked out and cleaned before applying MASTERTOP 504. Holes can be filled with a mixture of 3 parts MASTERTOP 504

POWDER, 1 part liquid latex and up to 2.5 parts of 1-4mm aggregate all measured by volume.
Porous surfaces such as concrete and sand: cement screeds should first be dampened down with water or (preferably) primed with a bonding agent such as RHEOMIX 121 diluted 2:1 with water or the latex component. Apply the MASTERTOP 504 mix to the primed area whilst still damp.

Timber surfaces should be primed with RHEOMIX 121 diluted with water. Steel surface should be primed with CONCRESIVE 1414. Allow the primer to become tacky before applying MASTERTOP 504.

Mixing:

Pour 90% of the resin component into a suitable mixing vessel. Using a suitable slow speed (300-400 rpm) drill fitted with a mixing paddle, mix the material until a smooth paste free from lumps is obtained, at which point the remainder of the resin can be added. Continue mixing until all the resin is absorbed.

Application:

Pour the mixed material onto the previously primed and tacky surface.

Using a trowel (notched or plain), pin screed or squeegee, spread the MASTERTOP 504 to the required thickness.
As soon as possible after levelling, roll the material with a spiked roller to release trapped air and achieve a flat surface.

Curing:

MASTERTOP 504 does not require curing, but it should be protected from wind, and water for 24 hours.

Watchpoints

- In warm weather store materials in cool room prior to use. Keep the mixed temperature less than 30°C. Ideal mixed temperature is 20°C. The lower temperature gives longer working time.
- Never re-constitute the mix after initial stiffening has taken place.
- Do not work at temperatures below 4°C.
- For use at thickness greater than 6mm, consult your Degussa representative.
- Always turn off under floor heating and allow sub-floor to cool before the application of MASTERTOP 504 and do not switch it on again for at least 24 hours after completion.

Equipment care

Clean all equipment in water immediately after use.

Specification clause

MASTERTOP 504

All floors indicated shall be levelled with MASTERTOP 504, flexible floor levelling compound manufactured by Master Builders Technologies, or similar approved, complying to the following specification.

Compositi on:	Two component floor levelling / system comprising of liquid latex and a cementitious powder combined with selected fillers,

and dispersing agents.

MASTERTOP 504 is to be applied strictly in accordance with the manufacturers instructions.

Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Degussa ME'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 is fully cured or dried). Treat splashes to skin and eyes immediately. If accidentally ingested, seek medical attention. Reseal containers after use. For further information refer to the Material Safety Data Sheet.

Note

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

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Quality

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08/2005 Degussa-IR

MASTERTOP® 1105

Solvent free pitch epoxy coating

Description

MASTERTOP 1105 is a high build, two component, solvent free, epoxy resin coating modified with specially refined coal tar pitch. Combining MASTERTOP 1105 with high grade MASTERTOP AGGREGATES will produce a slip resistant durable, coatings for numerous industrial situations.

Applications

MASTERTOP 1105 provides improved safety as a slip resistant coating for floors, ramps and other sloping surfaces which are subject to spillages of oils, grease or soaps. These slip resistant properties are especially important around machinery in engineering and associated industries, and in other areas where constant heavy traffic can leave concrete smooth, polished and consequently dangerous.
In addition to concrete, MASTERTOP 1105 will protect weathered bitumen, asphalt and tar based materials from attack by fuels and oils, making it particularly suitable for use around fuel pumps and in vehicle maintenance shops.

MASTERTOP 1105 offers resistance to a wide range of chemicals and aggressive solutions found in general industry, 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.

Packaging

MASTERTOP 1105 is supplied in 10 litre packs and CONCRESIVE 1020 in 1 litre packs. MASTERTOP 1105 Aggregate is available in 11kg.

Typical properties*

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

Pot life:	25°C	1 hour
	40°C	20 mins
Mixed density	1.82 g/cm³ @ 25°C	
(Base + Reactor + 1105 Agg)		
Max. service temperature:	65°C	
Tack free	25°C	12 hours
	40°C	5 hours

Application procedure

Preparation:

MASTERTOP 1105 must be applied to a clean, dry substrate free from dust, dirt, oil, grease and other contaminants. A clean surface will ensure adhesion between substrate and overlay.

Specialist finishes should not be applied to concrete which contains more than 5% moisture by mass.

New construction:

Floors to be coated or overlaid should be at least 28 days old unless water reducing admixtures have been incorporated. (Consult Degussa's Technical Dept. for advice).

Existing concrete:

All contamination must be removed and a sound clean substrate exposed. Mechanical means of preparation such as vacuum recovery shot blasting, high pressure water jetting, grit blasting or surface grinding are preferred followed by the removal of dust and other loose debris using an industrial vacuum.

Contamination by oils, grease and fats must be removed before starting other forms of preparation.

Steel:

Grit or shot blast to SA 2½ giving a surface profile of greater than 60 microns.

MASTERTOP 1105 should be maintained at approximately 20°C for at least 24 hours before mixing. During mixing in cold conditions correct conditioning is essential, but application should be halted if the ambient or substrate temperature is likely to fall below 10°C. Consideration should be given to the substrate or base slab as it is likely to be considerably colder than the surrounding air temperature. As the temperature increases pot life and working times are reduced.

Mixing:

Stir in both components before use. Pour the contents of the reactor tin into the base tin and mix with a low speed drill and paddle for 2-3 minutes until a uniform consistency is achieved. Pay particular attention to the sides and bottom of the mixing container and scrape during mixing to ensure complete dispersion.

A full mixed pack of MASTERTOP 1105 has a pot life of 30 minutes and must be used within that period. However, the pot life maybe extended by transferring the material, immediately after mixing, to a shallower container.

If MASTERTOP 1105 AGGREGATE is to be used as a filler, it should be added after the reactor and base resins have been mixed.

Application:

Porous substrates should be sealed with CONCRESIVE 1020 primer prior to application of MASTERTOP 1105. Consult Degussa's Technical Dept. for specific advice.

MASTERTOP 1105 can be applied by brush, short nap roller, serrated trowel or pin screed depending on the thickness required. If applied at thicknesses greater than 1mm then the applied coating should be rolled with a spike roller immediately after application to remove entrapped air. MASTERTOP SLIP RESISTANT AGGREGATES should be broadcast into the wet coating within 15 minutes of application.

MASTERTOP 1105 can be applied by different methods to suit intended finished uses.

Method 1

Slip resistant walkways, stairs, etc. Finished thickness approximately 0.8-1mm

Apply MASTERTOP 1105 by roller to the thoroughly prepared substrate at a rate of 0.2 litres/m². Broadcast MASTERTOP SRA No. 1 on to the wet surface at a rate of 2.0 kg/m², ensure the surface of the MASTERTOP 1105 is completely covered.

Allow to dry then remove excess aggregate by vacuum or soft brush, before applying a top coat of MASTERTOP 1105 to give a uniform surface finish at a rate of 0.2ltrs/m².

Method 2

Internal ramps, slopes and heavily trafficked areas, finished thickness approximately 1.5-2.0mm.

Apply MASTERTOP 1105 at 0.4 litres/m². Broadcast MASTERTOP SRA No. 3 onto the wet film at the rate of 3-4kg/m² and allow to dry. Remove excess aggregate, then overcoat with MASTERTOP 1105 at the rate of 0.4-0.5ltrs/m².

Method 3

External ramps, slopes and heavily trafficked areas, finished thickness approximately 4.0-5.0mm.

To the mixed MASTERTOP 1105 add one bag of MASTERTOP 1105 AGGREGATE and mix for 1-2 minutes.

Apply by serrated trowel or pin screed at a rate of 1.5 litres/m². Broadcast MASTERTOP SRA No. 3 on the wet MASTERTOP 1105 at a rate of 6-7kg/m². Allow to dry. Remove excess aggregate and overcoat with MASTERTOP 1105 at a rate of 0.5-0.8 litres/m² if required.
For the above systems allow a minimum of 12 hours and a maximum of 48 hours between coats.

Method 4

To the mixed MASTERTOP 1105 add 1 bag of MASTERTOP 1105 aggregate and mix for 1-2 minutes. Apply the mixed material to the prepared substrate at a thickness of 3 -4mm for medium duty or 4-5mm for heavy duty application, using trowel or pin screed. As soon as the material is spread to level, roll it with a spiked roller to release entrapped air. When rolling is complete but within 15 minutes from the time of laying, broadcast suitable hard wearing aggregate into the wet surface at the following rates:

Medium duty

1-3mm aggregate at 12kg/m²

Heavy duty

1-3mm aggregate at 16kg/m²

Remove excess aggregate after 24 hours.

Trafficking @ 20°C

Foot traffic	24 hours
Light to medium traffic	48 hours
Heavy traffic	3 days

Excess aggregate which will be about 25-30% can be reused if kept clean.

Yield

14 litres / 10 litre pack of MASTERTOP 1105 with 11kg of MASTERTOP 1105 Aggregate.

Storage

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 up to 1 year when stored as above.

Note

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

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08/2005 Degussa-IR

MASTERTOP® 1110 T

(T denotes a Tropicalised version. The formulation has not been changed)

Water based epoxy floor and wall coating

Description

MASTERTOP 1110 T is a two component, water dispersible, epoxy resin coating, designed to provide a hygienic seal to protect concrete, timber and asphalt floors as well as walls and ceilings.

Primary uses

MASTERTOP 1110 T gives good general protection for concrete surfaces and provides an easily cleaned, non-dusting seamless, floor or wall finish in numerous industrial and commercial applications. The system is free of organic solvents and will not taint foodstuffs.

MASTERTOP 1110 T can be successfully applied to damp concrete surfaces making it particularly suitable for wet process industries, where a dry substrate may be difficult or impossible to obtain.

MASTERTOP 1110 T offers good general resistance to a wide range of chemicals and aggressive liquids, 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 1110 T may be applied in the following areas as a substrate seal coat or a wearing surface to epoxy toppings and screeds.

N.B. This gives examples only and does not constitute a full and comprehensive list. For further information on application possibilities contact Degussa .

- General food processing plants
- Fish and meat processing plants (walls)
- Hotels
- Soft drink and beverage production
- Manufacturing and food processing
- Hospitals and schools
- Washing and changing room walls
- Pharmaceutical factories
- Industrial and commercial kitchens (walls)

Advantages

- Moisture tolerant
- Cost effective
- Pigmented
- Easy application
- Solvent free, non tainting
- Easily cleaned
- Dust free surface
- Ease of maintenance
- Good bond to dense surfaces

Packaging

- MASTERTOP 1110 T is supplied in a 4 litre unit.

Typical properties*

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

Pot Life: 25°C	1 hour.
40°C	40 minutes
Specific gravity:	1.36 g/cm³
(varies with colour)	
Max. service temperature:	60°C
Min. recoat time:	10 hours. at 25°C
Max. recoat time:	48 hours. at 25°C
Dry film thickness:	75 -100 microns per coat

Hygiene

From all available information it has been found that MASTERTOP 1110 T shows a minimal risk of tainting foodstuffs during and after complete cure has taken place.

Application procedure

Preparation:

MASTERTOP 1110 T can be applied to a clean, dry or damp but not wet substrate free from dust, dirt, oil, grease and other contaminants. A clean surface will ensure improved adhesion between substrate and coating.

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

New construction:

Floors to be coated or overlaid should be at least 28 days old unless water-reducing admixtures have been incorporated. (Consult Degussa ME's Technical Services Department for advice). The removal of laitance and contaminants is best achieved by mechanical means such as vacuum recovery shot blasting.

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.

In areas of deeply penetrating contamination by oils, greases and fats, hot compressed air, treatment followed by impregnation with a low viscosity sealer / primer is the recommended treatment.

Prior to application, MASTERTOP 1110 T should be stored under cover and protected from extremes of temperature which will cause inconsistent workability and cure times of the mixed material. During application in cold conditions, correct conditioning is essential, but application should be halted if the ambient temperature is likely to fall below 10°C. Consideration should be given to the substrate or base slab as it is likely to be considerably colder than the ambient air temperature.

Mixing:

MASTERTOP 1110 T is a two component product consisting of base and reactor components. The base component should be mixed before use to redistribute any settlement that may have occurred during storage.

To the pre-mixed base add the complete contents of the reactor container. Using a slow speed drill with a suitable mixing attachment, mix for 1-2 minutes until a uniform streak free consistency is achieved. MASTERTOP 1110 T is supplied in preweighed units; at no time should packs / units be split.

Priming:

Substrates that are porous should be primed using MASTERTOP 1110 T diluted with up to 10% by volume of potable water per 4 litre pack. Coverage will be approximately 8-10m² / litre / coat.

Mixing should be as described above. Application should be by short haired roller or airless spray.

Coating application (Smooth):

Apply 2 coats of MASTERTOP 1110 T at 5-8m²/ litre / coat and allow at least 6-8 hours but no more than 48 hours between coats.

Apply the second coat at right angles to the first.

- MASTERTOP 1110 T should be allowed to cure for 24 hours prior to receiving light traffic. Full chemical cure is achieved after 7 days. As with all water based systems, good ventilation and air movement is required to assist curing.

Slip resistant coatings

Where slip resistance is required MASTERTOP SLIP SRA NO. 1 is broadcast into the wet base coat, to saturation. Leave overnight to dry then remove excess aggregate by sweeping or vacuuming, before applying the top coats.

When a slip resistant finish is applied in areas that will be wet and / or suffer from chemical spillage, a primer coat must always be applied.

Consumption:

PRIMER COAT (diluted) 8-10m² / litre
BASE COAT 6.5 - 7 m²/litre
AGGREGATE 1.5 - 2 kg/m²
TOP COAT 5 - 6 m²/litre/coat
(2 coats recommended)

Coverage will vary according to the nature of the substrate.

All calculated usages assume constant thickness on a regular substrate. Failure to achieve the required surface regularity will lead to additional material being used.

Storage

Store under cover out of direct sunlight and protect from extremes of temperature.

Failure to comply with 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 skin and eyes immediately. If accidentally ingested, seek medical attention. Reseal containers after use. For further information refer to the material safety data sheet.

Quality

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08/2005 Degussa-IR

MASTERTOP® 1210 PLUS

Multi component solvent free epoxy floor coating system

Description

MASTERTOP 1210 PLUS is a multi component solvent free epoxy floor coating system designed to offer continuous seamless floor protection at thicknesses between 0.5mm-1.5mm. MASTERTOP 1210 PLUS may be applied to produce either a smooth or profiled finish.

Primary uses

MASTERTOP 1210 PLUS has good wear and abrasion resistance and is suitable for use in many industrial applications. It can be used as a surface coating where a hygienic and high gloss appearance is required.

It provides impermeable protection against common oils, greases, lubricants, aviation fuels or oils such as Skydrol. In addition it offers 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 1210 PLUS may be applied in the following industries

NB This gives examples only and does not constitute a full and comprehensive list. For further information on application possibilities contact Degussa .

- Pharmaceutical and other medical laboratory situations.
- Industrial production facilities
- Light engineering workshops
- Aircraft hangars and maintenance areas.
- Warehouses
- Utility rooms and corridors
- Vehicle movement areas

Advantages

- Good wear and abrasion resistance.
- Easily applied.
- Smooth high gloss finish for hygienic applications.
- Good general chemical resistance.
- Limited maintenance.
- Durable

Packaging

MASTERTOP 1210 PLUS is supplied as a 26kg multi component pack (including colour pack).

Typical data of hardened material*

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

		25°C	40°C
Pot life		40 mins.	22 mins.
Curing time		15 hours	10 hours
Mixed density at 25°C		1.556	
Mixed density with Solvent No. 2			
Maximum service temp		60°C	
Compressive strength (ASTM C579-93)	1 day	36.4	48.6
	3 days	69.6	70.6
	14 days	79.4	80.2
Flexural Strength (BS 6319 Part 3)		19.0N/mm²	
Tensile Strength (BS 6319 Part 7)		15.0N/mm²	
Slip resistance (TRRL rubber)		104	

Guide to application

Remove all surface laitance, oil, grease or any defective concrete that will reduce the bond of the MASTERTOP 1210 PLUS to the substrate.

The surface over which the MASTERTOP 1210 PLUS is to be laid must be flat and suitably prepared.

Surface irregularities must be ground down or filled out with CONCRESIVE 2200 or repair materials from the EMACO range.

A light etch giving the texture of medium grit sand paper is the ideal surface profile for the application of MASTERTOP 1210 PLUS, this can be achieved by light grit blasting, capture blasting or surface grinding.

After all preparation has been completed, ensure dust is removed from the surface preferably by vacuuming.

Prior to application MASTERTOP 1210 PLUS should be stored under cover in an air-conditioned environment and protected from extremes of temperature which may cause inconsistent workability, finish and cure times for the mixed material.

Sealing:

All porous concrete surfaces to be overlaid with MASTERTOP 1210 PLUS must be sealed with a coat of MASTERTOP 1200 PLUS resin with the addition of 0.5ltr of SOLVENT NO. 2. Add the SOLVENT NO. 2 to the base and reactor components, after they have been decanted into the mixing container, then mix the base and reactor components together until all striations have disappeared. Apply the mixed material to the dry substrate at the rate of 6-8 m² / ltr using a medium or short hair roller. Allow the sealer to become completely tack free before over-coating with MASTERTOP 1210 PLUS.

Mixing:

Pour the reactor into the base container, add the colour pack and mix using a drill and spiral mixing head until all striations have disappeared and a uniform colour is obtained (for a minimum of 1 minute). Add the MASTERTOP 1210 PLUS aggregate, whilst continuing to mix for a further 2 minutes or until it can be seen that the mixed material is lump free.

Application:

To achieve a smooth finish at 0.5mm apply the MASTERTOP 1210 PLUS, as a single coat with a notched trowel or similar. At thickness greater than 0.5mm, use pin screed, trowel or airless spray.

The coating should be rolled with a spike roller as soon as possible after application to achieve a uniform finish. The applied coating should be rolled a second time after 15-20 minutes. Continuous rolling does not harm the product while it is still fluid.

Always wear spiked shoes when rolling the MASTERTOP 1210 PLUS with a spiked roller.

Yield

A 26kg unit will yield 16.71 litre of mixed material.

MASTERTOP 1210 PLUS systems are supplied in preweighed packs which should not be split or divided. It is important to use complete packs.

Equipment care

Remove uncured MASTERTOP 1210 PLUS from tools and equipment using SOLVENT NO

Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction and protect from extremes of temperatures. In tropical climates the product must be stored in an air conditioned environment.

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 products 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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