BASF

The Chemical Company

MASTERTOP® 1278

Epoxy based, fast return to service tough industrial floor coating for medium duty traffic

DESCRIPTION

MASTERTOP 1278 is a seamless, fast return to service floor coating based on a solvent free epoxy resin system. The cured coating provides a glossy, easily cleaned and hygienic surface with excellent resistance to mechanical wear and chemical attack at thickness between 0.4 mm – 1.0 mm.

The floor coating is available in a range of colours.

RECOMMENDED FOR

MASTERTOP 1278 is recommended for areas where abrasion due to light to moderate traffic or chemical spillage could erode the floor and to seal a floor to prevent bacterial growth and in areas where a high level of aesthetics is required. Application areas include:

- clean rooms in Pharmaceutical & other industries
- packing and storage areas of sugar, fertilizers and grain
- Industrial manufacturing or assembly plants
- automobile servicing and assembly areas
- aircraft maintenance hangars
- refurbishment to existing epoxy flooring where fast return to service is a factor

FEATURES AND BENEFITS

- Fast return to service- foot traffic in 8 hours, full chemical and mechanical resistance at 24 hours
- Excellent resistance to a wide range of chemicals
- Durable even under traffic conditions – fast build of mechanical properties means full service within 24 hours of application
- Pore free, seamless film - disinfectable
- Easy to clean
- Solvent free
- Permits colour-coding floor areas

PERFORMANCE DATA

Mixed density	1.46kg/litre
Pot life	30 minutes at 25°C 15 minutes at 40°C
Foot traffic	8 hours at 25°C
Vehicular traffic	24 hours at 25°C
Compressive strength ISO 178	>80MPa at 1 day >100MPa at 7 days
Abrasion resistance (ASTM D4060, 1000 cycles) (CS17 wheel)	96mg @ 24 Hrs
Hardness, Shore D (ASTM D 2240)	>70 at 1 day
Impact resistance 45 drops 1 Kg weight 1 meter height	Failure of concrete substrate
Adhesive bond strength to concrete (ASTM D4541)	>1.5MPa (concrete failure)
Pot life at 35°C	16 mins

All data measured for BC388 at 23±2°C unless stated otherwise.

APPLICATION

The floor receiving MASTERTOP 1278 must be sound, dry, fine-grained and load bearing, free of laitance, loose and brittle particles and substances which impair adhesion such as oil, grease, rubber skid marks, paint or other contaminants. The tensile bond strength of the substrate must be at least 1.5 MPa and a compressive strength of 25 MPa. Floor slabs directly in contact with the ground must have a proper vapour barrier installed and the moisture content of substrate shall not be higher than 7% through out.

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

Remove oil, grease, waxy contaminants, cement laitance and weak concrete by captive shotblasting or other mechanical means followed by vacuum removal. A prior removal of oil and grease contaminants by using specialist detergents is necessary before any mechanical surface preparation on heavily contaminated substrates.

Repair damaged or pitted areas using MASTERTOP P 688 with silica sand as a mortar or using Emaco T288 or T920 trafficable repair mortars

Priming

It is essential to seal the concrete surface prior to the application of MASTERTOP 1278. Apply MASTERTOP P 688 as a primer at 3-5 m^2/liter depending on the quality of substrate, ideally using a stiff brush, forcing the primer into the pores by a rotary scrubbing movement. Alternatively the use of a squeegee or rollers is also suitable for larger areas. If after drying, the surface appears patchy due to high absorption, recoat the primer. Allow the primer to become touch dry before commencing application of MASTERTOP BC 388.

Mixing

Mechanically mix the BC 388, using a slow-speed drilling machine fitted with appropriate mixing paddle. Add colour paste completely to the MASTERTOP BC 388 part A in its container and mix well until homogeneous and streak free. Pour the MASTERTOP BC 388 part B into the part A container and mix for at least 3 minutes or until a homogenous and streak free mix is achieved. Keep the mixing times the same for each mixed batch to ensure a uniform colour when the product is applied.

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Placing

MASTERTOP 1278 can be applied to a thickness of 0.4mm to 1.0mm, onto a smooth and flat substrate to a self-smoothing finish. Pour the mixed MASTERTOP 1278 over the substrate and spread with a notched trowel or a pin screed to the desired thickness (0.5 mm to 1.0 mm). The coating should be rolled with a spiked roller to expel air and achieve a smooth finish. Continue rolling until all air is released but well before the material starts to stiffen.

To create a non skid finish, a coarse aggregate can be broadcast into the primer or bodycoat, this should then receive a final sealing layer of MASTERTOP 1278. Consumption will depend upon the final surface texture required.

CURING

MASTERTOP 1278 is self-curing. Protect the applied area from dust, pedestrian or traffic for at least 8 hours. Full return to service at 24 hours at 25°C.

ESTIMATING DATA

A 14.1kg unit of MASTERTOP BC388 yields 9.65 litres of mixed material.

On a typical primed concrete surface: Each pack is sufficient for 17m^2 to achieve average thickness of 500 microns; this does not consider wastage as this is determined by the substrate profile as well as other factors such as applicator skills.

On existing epoxy flooring surface: Each pack is sufficient for 19 m^2 to achieve average thickness of 500 microns

PACKAGING

MASTERTOP 1278

Mastertop P688: Primer Mastertop P 688	Part A	10kg
Mastertop P 688	Part B	4kg
Total yield (primer)		13L

Mastertop Body coat Mastertop BC 388	Resin	10.5kg
Mastertop BC 388	Hardener	3kg
X1 Colour Pack		0.6kg
Total Yield (bodycoat)		9.65L

STORAGE & 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 12 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.

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.

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