MasterTop® 1324

Seamless, self-smoothing heavy-duty polyurethane based flooring system

DESCRIPTION

A multi-component, polyurethane based system for the protection of concrete floors subject to high levels of traffic, impact and abrasion. Enhanced flexibility provides excellent impact resistance and reduces the risk of cracking due to substrate movement. **MasterTop 1324** is available in smooth or slip-resistant profiles.

- **MasterTop P 650** - is a high grade, low-viscosity, two-component epoxy resin primer and substrate sealer.
- **MasterTop BC 375N** - is a non-solvented, low emission, two-component self-levelling polyurethane floor coating.
- **MasterTop TC 442W** Pigmented - is a water borne, non-solvented, low emission, two-component PU top coat which cures to a matt finish.
- **MasterTop TC 468** Pigmented - Polyurethane based, UV resistant, pigmented, elastic, matt, two-component finish floor coating.
- **MasterTop TC 943** Pigmented - is a non solvented, two-component topcoat producing a light stable, tough and durable surface with a lightly structured satin-matin finish that has exceptional scratch, impact and wear resistance.
- **MasterSeal TC 257** (Pigmented) - is a two-component hard wearing pigmented aliphatic polyurethane coating designed for application in heavily trafficked areas. It provides a UV-resistant, hard-elastic surface resistant to chemicals and abrasion.
- **MasterTop SR 1 -** A graded high purity quartz aggregate with a particle size in the range of 0.0-0.3mm.
- **MasterTop SR 3 -** A graded high purity quartz aggregate with a particle size in the range of 0.3-0.9mm

TYPICAL APPLICATIONS

Industrial floors, which require a matt, durable abrasion-resistant finish such as loading bay areas, production/assembly halls, exhibition halls, hospitals and schools, warehouses, service corridors, aircraft hangars.

PACKAGING

MasterTop 1324 is supplied as follows: -

MasterTop P 650	-	15kg
MasterTop BC 375N	-	30kg
MasterTop TC 442W Clear / Pigmented	-	10kg
MasterTop TC 468 Pigmented	-	21.45kg
MasterTop TC 943 Pigmented	-	10kg
MasterSeal TC 257 Pigmented	-	22.5 kg
MasterTop SR 1	-	25kg
MasterTop SR 3	-	25kg

SLIP RESISTANCE

MasterTop 1324 has been tested for slip resistance in accordance with BS 7976-2 : 2002.

COVERAGE

Smooth Finish

MasterTop P 650	0.15-0.3 kg/m² depending on surface texture and porosity
MasterTop BC 375N mixed with 15kg of **MasterTop SR 1** (smooth finish)	Approx. 2.5-4.0 kg/m²
MasterTop TC 442W Clear / Pigmented	0.08-0.10 kg/m² per coat (1 or 2 coats required)
Or (optional topcoats)	
MasterTop TC 468 Pigmented	0.10-0.15 kg/m² per coat (1 coat required)
MasterTop TC 943 Pigmented	0.12 kg/m² per coat (1 coat required)
MasterSeal TC 257 Pigmented	0.25 kg/m² per coat (1 coat required)

Slip Resistant Finish

MasterTop P 650	0.15-0.3 kg/m² depending on surface texture and porosity.
MasterTop BC 375N	Approx. 1 kg/m²
MasterTop SR 3	Approx. 2-3 kg/m²
MasterTop BC 375N	Approx. 0.6 kg/m²
MasterTop TC 943 Pigmented	0.12 kg/m² per coat (1 coat required)
MasterSeal TC 257 Pigmented	0.25 kg/m² per coat (1 coat required)

THICKNESS

From 1.5-2.5mm (dependent on surface profile required).

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TYPICAL PROPERTIES*

MasterTop P 650 –TYPICAL PROPERTIES

Cured at 7 days @20°C	
Pot Life:	20 min at 25°C
Density:	1.09
Bonding strength	Greater than cohesive strength of typical good quality concrete substrate
Application time	approx. 20 min. at approx. 25°C
Application temperature	10°C to 40°C substrate temp
Recoatable after	approx. 6 h at 30°C
	approx. 12 h at 20°C

MasterTop BC 375N – TYPICAL PROPERTIES

Density @ 23°C Part A Part B mixed	 1.5 g/cm³ 1.22 g/cm³ 1.45 g/cm³
Pot life @ 23°C	20 min
Tack free time	3 h
Re-coating interval / ready for traffic	min 12 h max. 72 h
Fully cured/ready for exposure to chemicals	7 days
Substrate and application temperatures	min. 5°C max. 30°C

Technical data cured material*

Tear resistance ASTM D1004	>30 kN/m
Shore-D hardness after 28 days ASTM D2240	>70
Elongation at break ASTM D412	>20%
Tensile strength ASTM D412	>10 N/mm²
Bond strength ASTM D4541	>2 MPa
Abrasion resistance ASTM D4060	<100 mg

*The above figures are intended as a guide only and should not be used as a basis for specifications.

MasterTop TC 442W – TYPICAL PROPERTIES

Mixing ratio A:B			4 : 1 by weight
Solid content	clear pigmented		43% 47%
Density	clear at 23°C	Part A Part B mixed	1.05 g/cm³ 1.13 g/m³ 1.07 g/m³
	pigmented at 23°C	Part A Part B mixed	1.14 g/cm³ 1.13 g/m³ 1.14 g/cm³
Working time at 20°C			45 min
Ambient and substrate temperature			Min. 10°C Max. 30°C
Recoating intervals at 20°C			Min. 12 h Max. 24 h
Light pedestrian traffic			
at 12°C / 50% r.h.			24 h
at 23°C / 50% r.h.			18 h
at 30°C / 50% r.h.			12 h
Fully cured at 23°C			5 days
Max relative humidity			Min. 30% Max. 80%
Surface properties			matt, light structure

MasterTop TC 468 – TYPICAL PROPERTIES

Ratio by weight	15.5 : 5.95
Mixed density	Approx. 1.20 g/cm³
Touch dry	After approx. 4 h
Curing, to foot traffic	After 24 h Bearing loads after approx. 7 days
Pot life at 20°C	Approx. 2 h
Pot life at 40°C	Approx. ½ h

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MasterTop TC 943 – TYPICAL PROPERTIES

Mixing ratio A:B			3:7 by weight
Solid content (pigmented)			93.9%
Density	(pigmented)	Part A	1.36 g/cm³
at 23°C	(pigmented)	Part B	1.22 g/cm³
	(pigmented)	Mixed	1.25 g/cm³
Viscosity		Part A	2400 mPa.s
		Part B	850 mPa.s
		Mixed	2050 mPa.s
Working time at 20°C			30 min
Ambient and substrate temperature			Min. 10°C Max. 30°C
Recoating intervals at 23°C 50% r.h.			Min. 20 h Max. 48 h
Light pedestrian traffic at 23°C / 50% r.h.			24 h
Fully cured at 23°C			7 days
Max relative humidity			Min. 30% Max. 90%
Surface properties			Satin-mat

MasterSeal TC 257 – TYPICAL PROPERTIES

Mixed density	1.25 g/cm³
Pot life ASTM D2471	60 min
Tack free time	approx. 2 h
Foot traffic (initial cure)	48 h
Application temperature	10°C to 35°C
Tensile strength ASTM D412	>12 N/mm²
Elongation ASTM D412	>30%
Tear resistance ASTM D1004	40 kN/m
Abrasion resistance ASTM C957	50 mg
Pull off bond strength on concrete ASTM D4541	>2 MPa

APPLICATION GUIDELINES

Prior to application **MasterTop 1324** should be stored under cover in air-conditioning and protected from extremes of temperature which may cause inconsistent workability, finish and cure times of the mixed material.

SURFACE PREPARATION

The surface to be coated must be clean and dry, free of laitance, oil, grease or any substance that may impair adhesion.
The preferred methods of preparation are; captive blasting, surface grinding or similar. Weak or damaged concrete must be removed, then replaced with a suitable repair compound from the **MasterEmaco** or **MasterBrace** range of products. Maximum moisture content 5% when tested with a suitable moisture meter.

APPLICATION TEMPERATURE

The quality of the final coating is dependent on the substrate and the material temperatures. We recommend a substrate temperature of min. +10°C and max. +35°C.

ASHPHALT

Contact the Master Builders Solutions Technical Department.

WOOD

Timber must be sound and free of substances that might impair adhesion.

RESIN APPLICATION

SMOOTH FINISH

1. Mix the Part A and Part B components of the **MasterTop BC 375N** together using a heavy-duty handheld mixer and suitable mixing paddle (Collomix Xo6 + DLX mixing paddle) for 30 seconds and then slowly add the 15 kg of **MasterTop SR 1** and continue mixing until a uniform lump free consistency is obtained. Pour the material into a clean container and continue mixing for a further 30 seconds.
2. Apply the mixed material at a minimum rate of **2.5 kg/m²** using a pin rake or pointed notched trowel. **(NB: 2.5 kg/m² will give a DFT of approx. 1.5 mm).**
3. **NB:** The above coverage rate does not include for any wastage or the surface profile which should be taken into consideration.
4. Using spiked shoes and a spiked roller to assist air release and smoothing of the product.
5. Remove masking tape from free edges before material hardens.
6. Allow to cure for at least 12 hours a 20° before applying the topcoat BUT do not delay the application of the chosen topcoat beyond 48 hours after application of the **MasterTop BC 375N.**
7. Avoid contact with water for at least 24hrs (23ºC / 50% rh).

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SLIP RESISTANT FINISH

1. Mix the Part A and Part B components of the **MasterTop BC 375N** together for not less than one minute and then slowly add the 15kg of **MasterTop SR 1** and continue to mix for a further 1-2 minutes until a uniform lump free mix is obtained. Pour the material into a clean container and continue mixing for a further 30 seconds.
2. Apply the mixed material at a minimum rate of **1 kg/m²** using a roller, squeegee or pin screed. Whilst still wet broadcast **MasterTop SR 3** onto the surface at the rate of **2.0 - 3.0 kg/m²** and allow to cure overnight.
3. When dry, remove any excess aggregate, then mix and apply a topcoat of **MasterTop BC 375N** without the addition of **MasterTop SR 1** at minimum rate of **0.6 kg/m²** using a medium pile roller or squeegee.
4. Allow to cure for minimum 12 hours and apply one topcoat of **MasterTop TC 943** / **MasterSeal TC 257** (All pigmented) - number of actual coats required to be determined based upon aesthetic requirements, etc.
5. Keep the completed floor sections totally free of ALL traffic for at least 24 hours after the final application and avoid contact with water for at least 48hrs (23ºC / 50% RH).
6. Note: Any masking tape used during the application process should be removed before the resin hardens.

Note: Detailed method statements should be requested and referred to as part of the application planning process.

CHEMICAL RESISTANCE

Contact your Master Builders Solutions Technical Department.

STORAGE

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

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

HEALTH AND SAFETY

For further information, a material safety data sheet is available to the specialist applicator.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

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