

# MasterTop TC 428

**2K, non-solvented, pigmented, semi-glossy finish, water-based epoxy top coat for concrete floors and screeds and as topcoat on water-based, diffusion permeable flooring systems**

## PRODUCT DESCRIPTION

MasterTop TC 428 is a non-solvented, water-based, pigmented, two component epoxy top coat which cures to a semi-glossy finish. Either used as a coating on concrete or screeds and top coat on diffusion permeable flooring systems.

## FIELDS OF APPLICATION

MasterTop TC 428 is designed for indoor dust proofing, surface hardening and sealing of concrete floors or cementitious and magnesite screeds. Moreover, it can be used as protective layer during the building phase. MasterTop TC 428 is used in MasterTop 1728 and MasterTop 1728 R systems. Typical fields of application are as follows:

- Warehouses.
- Industry with low – medium traffic.
- Garages.

## FEATURES AND BENEFITS

- Water-based, environmentally friendly.
- Virtually odorless during application.
- Water vapor permeable.
- Easy to apply.
- Easy to clean.
- Good adhesion to cementitious substrates.
- Semi-glossy finish.

## SUBSTRATE PRE-TREATMENT

All substrates (new and old) must be structurally sound, dry and free of laitance and loose particles. Clean floors of oil, grease, rubber, skid marks, paint stains and other adhesion impairing contaminants. Mechanical surface profiling by grit or shot blasting, high-pressure water jetting, grinding or scabbling (including the necessary post-treatment) are the preferred floor preparation methods. Pre-treatment is only necessary when the re-coating interval has been exceeded or when too much dust are present on the surface or when you apply MasterTop TC 428 on old aged flooring systems. After surface preparation the tensile strength of the substrate should exceed 1.5 N/mm<sup>2</sup> (check with an approved pull-off tester i.e. "Herion" at a load rate of 100 N/s). MasterTop TC 428 can be applied on wet substrates with damp proof membranes (concrete surface must be visible dry).

The residual moisture content of the substrate must not be exceed 6% (check with e.g. CM device).

The temperature of the substrate must be a least 3°C above the current dew point temperature. A damp proof course must have been properly installed and intact.

## APPLICATION METHOD

MasterTop TC 428 is supplied in working packs which are pre-packaged in the exact ratio. Before mixing, precondition both A and B components to a temperature of approximately 15 to 25°C. Pour the entire contents of Parts B into Part A. **DO NOT MIX BY HAND.** Mix with a mechanical drill and paddle at a low speed (ca. 300 rpm) for at least 3 minutes.

Scrape the sides and the bottom of the container several times to ensure complete mixing. Keep the mixer blades submerged in the coating to avoid introducing air bubbles. **DO NOT WORK OUT OF THE CONTAINER USED FOR MIXING.**

After proper mixing to a homogeneous consistency pour the mixed Parts A and B into a fresh container and mix for another 1 minutes.

As a rule, MasterTop TC 428 is applied in two coats, where the consumption per coat depends on the type of application. (See "Consumption"). For the first coat (priming) the dilution is 10% with water and applied by a short-haired roller.

For the second coat the product is ready-for-use. The second, and if necessary the third, coat is applied after the previous coat has dried, but preferably the following day.

As with all water borne sealers, it is important to avoid dry edges by always working wet in wet when overlapping otherwise roller marks will be visible in the final finish. Using a max. 40 cm, medium nap roller, start in the middle of one of the short sides of the floor. Dip the roller into the mixed material and roll out a strip of MasterTop TC 428, parallel to the wall out to one of the corners. Dip the roller into the material once again and roll out a second strip from the starting point out to the other corner. Move backwards and repeat

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these steps, overlapping the first strip by a few cm. Using a second roller, starting in one corner, back roll in a criss-cross pattern the MasterTop TC 428, without stopping, to the other corner. When almost all the laid material has been back rolled, lay more strips and back roll as described above. Using this method, the period between the overlapping should not exceed 5 minutes and visible roller marks will be minimised.

For slip resistance finishes, broadcast quartz aggregates on the fresh MasterTop TC 428. The day after, remove the excess of aggregates and apply again MasterTop TC 428.

MasterTop TC 428 dries primarily by evaporation of water followed by a chemical cross-linking reaction. Therefore when applying MasterTop TC 428 the ambient temperature and humidity are of importance. High humidity (especially in combination with low temperatures) slows down the drying process and the gloss level. After application, the surface should be protected **from direct contact with water for at least 24 h (15°C / 50 % r.h.)**.

### CONSUMPTION

Smooth finish (MasterTop 1728 system):

- First layer (priming): 0.15 – 0.20 kg/m<sup>2</sup> (Dil. 10% with water).
- Second layer: 0.20 – 0.25 kg/m<sup>2</sup> (no dilution).

Slip resistance finish (MasterTop 1728 R system):

- First layer (priming): 0.40 – 0.60 kg/m<sup>2</sup> (Dil. 10% with water).
- Sand broadcasting: 1.5 – 2.0 kg/m<sup>2</sup>.
- Second layer: 0.40 – 0.60 kg/m<sup>2</sup> (no dilution).

For very porous substrates or light colours, a third layer could be necessary.

### CLEANING AGENT

Re-usable tools should be carefully cleaned immediately after use with water. Once the material has cured mechanical cleaning is required which is made easier by immersion of the tools in MasterTop CLN 44.

### PACKAGING

MasterTop TC 428 is supplied in 16 kg working packs.

### COLOUR

MasterTop TC 428 is available in a wide range of RAL colours. For more information, please consult your local sales office.

### STORAGE

Store in original containers, under dry conditions and a temperature between 15–25°C. Do not expose to direct sunlight. Protect from frost. For maximum shelf life under these conditions, see "Best before...." label.

### EU REGULATION 2004/42 (DECOPAINT GUIDELINE)

This product conforms to the EU directive 2004/42/EG (Deco-Paint directive) and contains less than the maximum allowable VOC Limit (Stage 2, 2010). According to the EU directive 2004/42, the maximum allowable VOC content for the Product Category IIA / j type wb is 140 g/l (Limit: Stage 2, 2010). The VOC content for MasterTop TC 428 is < 140 g/l (for the ready to use product).

### WARNING AND PRECAUTIONS

In its cured state, MasterTop TC 428 is physiologically non-hazardous. The following protective measures should be taken when working with the material:

Wear safety gloves, goggles and protective clothing. Avoid contact with the skin and eyes. In case of eye contact, seek medical attention. Avoid inhalation of the fumes.

When working with the product do not eat, smoke or work near a naked flame. For additional references to safety-hazard warnings, regulations regarding transport and waste management please refer to the relevant Material Safety Data Sheet. The regulations of the local trade association and/or other authorities, regulating safety and hygiene of workers handling epoxy resins must be followed.

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Technical data*				
Mix ratio			by weight	1 : 0,23
Density	Part A	at 23°C	g/cm <sup>3</sup>	1.3
	Part B	at 23°C	g/cm <sup>3</sup>	1.1
	mixed	at 23°C	g/cm <sup>3</sup>	1.2
Viscosity (Brookfield, Sp. 5 / 20rpm)	Part A	at 23°C	mPa.s	2600
	Part B	at 23°C	mPa.s	1040
	mixed	at 23°C	mPa.s	3000
Solids content (%)			by weight	Approx. 61
Pot life (16-kg-unit)		at 23°C	min.	60
Ambient and substrate temperatures			°C	min. 10
			°C	max. 30
Re-coating interval		at 23°C	h	min. 16
			h	max. 48
Ready for low traffic		at 23°C	h	48
Fully cured		at 23°C	d	7
Technical data cured material*				
Gloss level		at 85°	Approx. 40	
Taber Wear Resistance (1KG, CS10, 1000 Rev)		EN ISO 5470-1	mg	80
Permissible relative humidity			%	max. 70

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

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## CE MARKING ACCORDING TO EN 13813

	
BASF Construction Chemicals España, S.L. Carretera del Mig, 219 08907 L'Hospitalet de Llobregat (Barcelona)	
16	
342801	
EN 13813: 2002	
EN 13813:2002 ZA.1.5	
Synthetic resin screed for internal uses	
Essential characteristics	Performance
Fire behavior	Bfl-s1
Release of corrosive substances	SR
Water permeability	NPD
Wear resistance	< AR 1
Bond strength	> B 1,5
Impact resistance	> IR 4
Impact sound insulation	NPD
Sound absorption	NPD
Heat insulation	NPD
Chemical resistance	NPD

NPD = No performance determined

Performance determined in System Build-up **MasterTop 1728**

## CE MARKING ACCORDING TO EN 1504-2

	
BASF Construction Chemicals España, S.L. Carretera del Mig, 219 08907 L'Hospitalet de Llobregat (Barcelona)	
16	
342801	
EN 1504-2:2004	
EN 1504-2:2004 ZA.1f	
Surface protection products – Coating	
Essential characteristics	Performance
Linear shrinkage	NPD
Compressive strength	NPD
Abrasion resistance	< 3000 mg
Permeability to CO <sub>2</sub>	NPD
Permeability to water vapour	Class I
Capillary absorption and permeability to water	< 0,1 kg/(m <sup>2</sup> xh <sup>0,5</sup> )
Thermal compatibility	NPD
Resistance to severe chemical attack	NPD
Impact resistance	Class I
Adhesion by Pull-off test	≥ 2,0 N/mm <sup>2</sup>
Reaction to fire	Bfl-s1
Dangerous substances	See MSDS

NPD = No performance determined

Performance determined in System Build-up **MasterTop 1728**

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In view of widely varying site conditions and fields of application of our products, this technical data sheet is meant to provide general application guidelines only. This information is based on our present knowledge and experience. The customer is not released from the obligation to conduct careful testing of suitability and possible application for the intended use. The customer is obliged to contact the technical help-line for fields of application not expressly stated in the technical data sheet under "Fields of Application". Use of the product beyond the fields of application as stated in the technical data sheet without previous consultation with BASF and possible resulting damages are in the sole responsibility of the customer.

All descriptions, drawings, photographs, data, ratios, weights i.e. stated herein can be changed without advance notice and do not represent the condition of the product as stipulated by contract. It is the sole responsibility of the recipient of our products to observe possible proprietary rights as well as existing laws and provisions. The reference of trade names of other companies is no recommendation and does not exclude the use of products of similar type. Our information only describes the quality of our products and services and is no warranty. Liability is accepted for incomplete or incorrect particulars in our data sheets only in the event of intent or gross negligence, without prejudice to claims under product liability laws.