



The Chemical Company

# MASTERTOP® P 677 Z CONIPOX® 77 Z

## Solvent Free, Two Component, Epoxy Resin Based Primer

### Description of Product

**MASTERTOP® P 677 Z** is an epoxy based, two component, low viscosity primer and penetration material for use on mineral substrates such as concrete and cement.

### Standards

**MASTERTOP® P 677 Z has been tested to, and meets the requirements of the German bridge deck isolation specification TL/TP BEL-EP of the ZTV-BEL-B 87.**

### Fields of Application

- With the addition of the appropriate amount of silica sand, it can be used as a repair mortar.
- On surfaces bitumen membrane is to be applied, and used as a surface smoothing mortar. (According to German bridge deck isolation standards **TL/TP BEL-EP ZTV-BEL-B 87.**)

- Under **MASTERTOP** epoxy/ polyurethane floor coatings
- As a primer under **CONIPUR** polyurethane isolation systems.

### Features and Benefits

- Easy to apply
- Tolerant to damp that raises from under the floor
- Penetrates to capillary holes within concrete structure hence blocking the holes.
- Provides excellent penetration and adherence on cement based surfaces.
- **MASTERTOP® P 677 Z** does not lose its performance under sudden temperature changes between -20 - +50°C. it has also been tested under +250°C and above for short periods of time.
- It has been tested according to German Bridge isolation system standards.
- It does not contain any solvents.

### Technical Data

Structure	
<b>MASTERTOP® P 677 Z</b> Component A	Epoxy Resin
<b>MASTERTOP® P 677 Z</b> Component B	Epoxy hardener
Colour	Transparent liquid
Mix Density	1, 089 kg/liters
Shore D hardness	80 - 90
Compressive strength (7 days)	50 N/mm <sup>2</sup>
Flexural Strength (7 days)	20 N/mm <sup>2</sup>
Adherence (concrete) (7 days)	> 2 N/mm <sup>2</sup>
Ambient temperature	+8°C +35°C
Working time	20 minutes
Traffic ready	8 hours
Fully cured	7 days

All figures are at 23°C with a relative humidity of 50%. Higher temperatures cause shorter cure times and vice versa.



# MASTERTOP® P 677 Z

## CONIPOX® 77 Z

### Chemical Resistance

**MASTERTOP® P 677 Z** is tolerant to many chemicals; lube oil and diluted acids, diluted soda, salt solutions. Please refer to Technical Help for a full list of chemically tolerated substances.

### Application Procedure

#### Preparation of Substrate

**MASTERTOP® P 677 Z** is supplied in working packs which are pre-packaged in the exact ratio. Before mixing, both A and B components are preconditioned to a temperature of approximately 15 to 25 °C. Concrete substrates should be at least 3 weeks old, C25 or a minimum dosage of 350 minimum. After Preparation of Substrate the tensile strength of the substrate should exceed 1.5 N/mm<sup>2</sup> (checkable with an approved pull-off tester at a load rate of 100 N/s). The residual moisture content of the substrate must not exceed 4 %, the substrate temperature should remain a minimum of +8°C. The temperature of the substrate must be at least 3 K above the current dew point temperature.

All substrates must be structurally sound, dry and clean. Surfaces should be clear of oil, grease, and other adhesion impairing contaminants. Bubble formation due to expansion of air that is enclosed in the concrete should be removed by blastrack or rotatiger, Dust should be removed with a vacuum cleaners.

If **MASTERTOP® P 677 Z** is to be coated on a soil base a layer against rising damp should be installed according to DIN 18195 (or equivalent) standards. Windows, doors and the roof should be already installed and closed.

**MASTERTOP® P 677 Z** can be applied when the residual moisture content of the substrate exceeds 4 %. Please refer to Technical Help for detailed information.

### Mixing

Mix **MASTERTOP® P 677 Z** component A with a mechanical drill and paddle at a very low speed (ca. 300-400 rpm) for at least 3 minutes. Add **MASTERTOP® P 677 Z** component B gradually and mix till you reach a homogeneous consistency. Pour the contents into a clean container and mix for another two minutes. When **MASTERTOP® P 677 Z** mixture is ready, oven dried silica can be added in 1/0,5-1/2 ratio if the surface is too porous. When added oven dried silica in 1/1 or 1/5, **MASTERTOP® P 677 Z** can be used as a repair mortar.

### Mixing Ratio

<b>MASTERTOP® P677 Z</b>	<b>Component A</b>	<b>Component B</b>
Mix amount	10,35 liters	4,65 liters
Mix density	1,089 kg / liters	

With 1/0,5 addition of oven dried silica, **MASTERTOP® P 677 Z** mix density reaches 1,60 kg/liter. ; With 1/5 s addition of oven dried silica, **MASTERTOP® P 677 Z** mix density reaches 2.25 kg/liters.

### Application Procedure

**MASTERTOP® P 677 Z** A+B is applied to the prepared substrate by spreading with a squeegee. Oven dried silica (0,1 - 0,3 mm or 0,3 - 0,8 mm) is transferred to the still wet primer in order to improve adhesion of the following epoxy or PU coat.

With the addition of enough oven dried silica to **MASTERTOP® P 677 Z** A+B, an excellent repair mortar is obtained for both primed and coated

# MASTERTOP® P 677 Z

## CONIPOX® 77 Z

surfaces. Mortar is spread with a trowel and oven dried silica (0,1 - 0,3 mm or 0,3 - 0,8 mm) is transferred into the still wet primer.

### Coverage

The Coverage of **MASTERTOP® P 677 Z** A+B is between 0.3 - 0.5 kg/m<sup>2</sup> depending on the condition and porosity of the substrate. Coverages generally vary on priming solutions.

### Watchpoints

- Avoid application under excessive heat or wind and/or when ambient and/or substrate temperature is below +8 or above +35°C°C.
- As the application material should have the same temperature as the ambient and substrate temperature, make sure it has been stored for at least 1-2 days at the same temperatures before application.
- In cold conditions, ambient, substrate and material temperatures should be preconditioned to +20- +25°C by artificial means to make the material more workable.
- Polyurethane and epoxy floor coatings should be applied by specialists.
- Reaction times of resin based systems depend on ambient and substrate temperatures as well as relative humidity. Under lower temperatures reaction times are longer and this increases pot life, coating interval and working time. In addition to this, Coverage increases as the viscosity gets higher. High temperatures increase chemical reactions and the above mentioned time decreases accordingly. For the material to be cured properly, ambient and substrate temperatures should not fall below specified limits. After application, the material should be protected from direct contact with

water minimum for 24 hours. Within this period, contact with water can cause a surface carbonation and/or surface tackiness, both of which must be removed. In such cases overall coating should be removed from the floor and renewed.

- **MASTERTOP® P 677 Z** is supplied in working packs which are pre-packaged in the exact ratio. No solvent should be added.
- Mix with a mechanical drill and paddle at 300-400 rpm.
- DO NOT MIX BY HAND. Mix with a mechanical drill and paddle at 300-400 rpm. for at least 3 minutes.
- After the first mix, contents should be poured into a clean container and mixed once again.
- Empty packs should be put into each other and properly disposed.

### Cleaning of Tools

Used tools and equipment must be cleaned carefully with an appropriate solvent. Once cured **MASTERTOP® P 677 Z** can only be removed by mechanical means.

### Packaging

15 kg set  
Component A : 10.35 kg drum  
Component B : 4.65 kg drum  
Also supplied in barrels.

### Storage

Store in an unopened, original container, under dry and cool conditions and protect against frost. For short term storage, do not stack more than 3 palletes on top of each other and dispatch them on a first come first go basis. Palletes should not be stacked on each other long term.

# MASTERTOP® P 677 Z

## CONIPOX® 77 Z

### **Shelf Life**

12 months in original unopened packaging if stored in appropriate conditions. Opened packages should be consumed in one week.

### **Health and Safety Precautions**

It is dangerous to approach application sites with fire. Fresh air should be circulated in storage and application sites. The following protective measures should be taken when working with the material: Wear safety gloves, goggles and protective clothing.

Because of irritation effects of the uncured material, components should not come in contact with the skin, or eyes. In cases of contact the effected area should be washed with plenty of water and soap. If swallowed, seek medical attention immediately. Do not drink or eat at the application site. Keep out of reach of children.

For detailed information please refer to the safety information form (material data sheet).

### **Disclaimer**

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