The Chemical Company

MasterSeal® P 377 (Formerly known as MASTERTOP® P 677 Z)

Solvent Free, Two Component, Epoxy Based Primer

Description of the Product

MasterSeal® P 377 is an epoxy based, two component, low viscosity primer and penetration material for use on mineral substrates such as concrete and cement.

Standards

MasterSeal® P 377, A 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.
- Used as a surface smoothing mortar on surfaces where bitumen membrane is to be applied. (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 the floor.
- Penetrates to capillary holes within concrete structure hence blocks the holes.
- Provides excellent penetration and adherence on cement based surfaces.
- **MasterSeal® P 377** 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 the German Bridge isolation system standards.

Technical Data

MasterSeal® P 377 Part A **MasterSeal® P 377** Part B	Epoxy Resin Epoxy hardener
Color	Transparent liquid
Mixed Density	1.089 kg/liters
Shore D hardness	80-90
Compressive strength (7 days)	50 N/mm²
Flexural Strength (7 days)	20 N/mm²
Adherence (concrete) (7 days)	> 2 N/mm²
Ambient temperature	+8°C +30°C
Working time	20 minutes
Traffic ready	8 hours
Fully cured	7 days

The above figures are valid for 23° C and intended as a guide only and should not be used as a basis for specifications.

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■ It does not contain any solvents.

Chemical Resistance

MasterSeal® P 377 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

The concrete substrates on which the product is going to be applied should be C25 or dosage of 350 minimum and the concrete should be 3 weeks old at least. After the preparation of the surface, the tensile strength of the substrate should exceed 1.5 N/mm^2 (tested with an approved pull-off tester at a load rate of 100 N/s). The residual moisture content of the substrate should not exceed 4 % (tested with e.g. CM device). A damp proof course should be installed properly and be inact. The substrate temperature should remain +8ºC minimum and the temperature of the substrate should at least be 3 K above the current dew point.
All substrates should be structurally sound, dry and clean. Oil, grease and other adhesion impairing contaminants should be removed Bubble formation on the surfaces which absorbed oil should be removed with the usage of a blastrack or rotatiger. Oil contaminated substrates should first be precleaned with an emulsifying cleaning detergent according to the supplier's instructions. Finally, the concrete or cement screed surface should be cleaned by using a high pressured water jet and excess water should be removed by a wet/dry vacuum cleaner.
If **MasterSeal® P 377** is to be coated on a soil based substrates a layer against rising damp should be installed according to DIN 18195 (or equivalent) standards. The windows, the doors and the roof should be already installed and closed. **MasterSeal® P 377** can be applied when the residual moisture content of the substrate exceeds 4%. Please refer to Technical Help for detailed information.

Mixing

MasterSeal® P 377 is supplied as ready to use kits in the exact ratio. Before mixing, precondition both A and B parts to the temperature of +15 - +25ºC. Pour the entire contents of part B into the container of part A; make sure that there is no product left in the part B package. Scrape well the sides and the bottom of the container to ensure a thorough mixing. After mixing **MasterSeal® P 377** parts for 3 - 4 minutes, pour the mix into a fresh container, set it aside for a while and mix for another minute. When **MasterSeal® P 377** mixture is ready, oven dried silica can be added with a ratio of 1/0.5-1/2 if the surface is too porous. When 1/1 or 1/5 oven dried silica added, **MasterSeal® P 377** can be used as a repair mortar.

Mixing Ratio

MasterSeal® P 377	Part A	Part B
Mixing Ratio	10.35 liters	4.65 liters
Mixed Density	1.089 kg/lt	

*With 1/0.5 addition of oven dried silica, **MasterSeal® P 377** mix density reaches 1.60 kg/liter. ; With 1/5 s addition of oven dried silica, **MasterSeal® P 377** mix density reaches 2.25 kg/liters.*

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Application Procedure

MasterSeal® P 377 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 broadcast to the still wet primer in order to improve the adhesion of the following epoxy or PU coat. With the addition of enough oven dried silica to **MasterSeal® P 377** A+B, an excellent repair mortar is obtained for both primed and coated surfaces. Mortar is spread with a trowel and oven dried silica (0.1-0.3 mm or 0.3-0.8 mm) is broadcast to the still wet primer.

Coverage

The Coverage of **MasterSeal® P 377** A+B is between 0.3-0.5 kg/m^2 depending on the condition and the porosity of the substrate. The coverage generally vary on priming solutions.

Watch Points

- Avoid application under excessive heat or wind and/or when the ambient and/or substrate temperature is below +10 or above +30ºC.
- The materials to be used at the appropriate temperatures should be brought and stored in the application area 1-2 days prior to the application and enabled to adjust the ambient conditions.
- In extremely cold conditions, heaters should be used to increase the ambient and the workability of the product, the packages should be preconditioned to +20 - +25ºC to become ready to use.
- Epoxy and polyurethane based floor coatings should be applied by specialists.
- The reaction and workability times of resin based systems depend on the ambient and substrate temperatures as well as the relative humidity. Under lower temperatures, the chemical reaction times are prolonged and this increases the pot life, coating interval and the working time. In addition to this, the consumption is increased as the viscosity increases. High temperatures ignite stronger chemical reactions and the above mentioned times decrease accordingly. For the material to be cured properly, the ambient and the substrate temperatures should not fall below the specified limits. After the application, the material should be protected from direct contact with water for 24 hours minimum. Within this period, a contact with water may cause a surface carbonation and/or tackiness; both of which will cause the coating to lose its characteristics. In such cases, the overall coating should be removed from the floor and renewed.
- **MasterSeal® P 377** is supplied in working packs which are pre-packaged in the exact ratio. No solvent should be added.
- Mixing should be done with a mechanical drill at 300 - 400 rpm with epoxy/polyurethane mixing paddles.
- DO NOT MIX BY HAND.
- After the first mix, contents should be poured into a clean container and mixed once again.
- The empty packs should be consolidated and disposed properly in order to prevent reusing of the packages.

Cleaning of Tools

Used tools and equipment must be cleaned carefully with an appropriate solvent. Once cured **MasterSeal® P 377** can only be removed by mechanical means.

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Packaging

15 kg set
Part A: 10.35 kg drum
Part B: 4.65 kg drum

Storage

The product should be stored in its original package, in a cool and dry place protected from frost. For short term storage, maximum 3 palettes should be placed on top of each other and the shipment should be made on a 'first come, first go' basis. Palettes should not be placed on top of each other during long term storage.

Shelf Life

The shelf life is 12 months from the date of production under suitable storage conditions. Opened packages should be stored under suitable storage conditions and used within 1 week.

Health and Safety Precautions

It is dangerous to approach the application sites with fire. Fresh air should be circulated in the storage and the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge **BASF Yapi Kimyasallari Sanayi A.Ş.** is only responsible for the quality of the product. **BASF Yapi Kimyasallari Sanayi A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones (08/2013).

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GOSB İhsandede Caddesi 1000, Sokak No=1
Gebze / Kocaeli TURKİYE

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EN 1504 - 2 : 2004

Epoxy based primer

Capillary absorption and permeability to water	w<0,1 kg/m².√h
Depth of penetration	NPD
Adhesion strength by pull-off test	Rigid Systems With traffic >2,0 N/mm²(1,5 min)
Abrasion Resistance	10% improvment in abrasion resistance in comparison with a non impregnated sample
Impact resistance	After loading no cracks and delamination Class I:4 Nm

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