

# MasterShield® PEL 1100

Water Repellent Material for Absorbent Surfaces

## Material Description

MasterShield® PEL 1100 is a monomeric alcyalcoasilane based, single part, non-solvent, low viscosity, transparent, ready to use water repellent material.

## Areas of Application

- On concrete surfaces (beams and tiles of bridge columns, sea structures, exterior surfaces of reinforced concrete buildings, etc.)
- On brick and roof tile surfaces (exterior surfaces of masonry structures)
- On tile surfaces
- On exteriors as water repellent against dusting and efflorescence

## Characteristics and Benefits

- Single part, easy to apply
- Since it is transparent, it does not change the look and color of applied surfaces
- Breathing, water vapor permeable
- Prevents penetration of water to surfaces and acts as a shield against harmful effects of water soluble salts like chlorites
- Superior penetration
- High alkali resistance
- Stops alkali-silicate reactions in the concrete.
- Covers micro cracks up to 0.3 mm width

- Conforms with ZTV SIB 90 standards of German Ministry of Communication
- High freezing-thawing resistance
- Does not contain solvents

## Processing Method

### (A) Preparation of Substrate

Application surface has to be dry and surface must be cleaned off all kinds of damaged, loose concrete particles, oil, paint, lime, fungus, moss, curing materials, efflorescence, asphalt, etc. traces that can prevent penetration of the material to the concrete. Pressurized water jet or mechanic abrasion methods (sand blasting, shot blasting) may be used for surface preparation. If the application will be made on newly poured concrete, then 28 days must be waited for curing to be completed. Damaged concrete surfaces have to be repaired by MasterCrete® series repair mortars before MasterShield® PEL 1100 application. If there is no sufficient information about pre-applied chemicals on the surface, then material should be tested on a small area before application. Plants near application surface should be protected from contacting MasterShield® PEL 1100.

### (B) Processing

MasterShield® PEL 1100 is a single part and ready to use material. It must be applied by spraying after making necessary surface preparations. Pressure of the spraying equipment has

## Technical Properties

Structure of the Material	Monomeric Alkyl Alkoxyolate
Color	Transparent
Density (DIN 51757)	0,88 kg/litre
Viscosity	0,95 mPa.s
Refractive Index	1,4000
Flash Point (DIN 51755)	+63°C
Point of Departure (DIN 51751)	+186°C
Service Temperature	+5°C +45°C

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to be low and a suitable nozzle must be used. **MasterShield® PEL 1100** must not be atomized during spraying and no brush should be used during the application. Enough material should be sprayed on the surface during the application and wet layers should be observed on surfaces.

## Consumption

150-300 g/m<sup>2</sup> depending on surface absorption.

## Point to Consider

- **MasterShield® PEL 1100** must not be used on non-absorbing surfaces like glass, wood, plastic and metal.
- **MasterShield® PEL 1100** must not be atomized during spraying and suitable spraying equipment should be used. No brush should be used during the application.
- Environment and surface temperature should not be below +5°C and over +45°C during the application.
- Before the application, 24 to 72 hours must be waited for surfaces to dry after heavy rain or water jet application.
- If rain is forecasted in 4 hours, application should not be made.
- **MasterShield® PEL 1100** is delivered in ready to use packages. Solvents or water should not be added to the mixture during the application.

## Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **MasterShield® PEL 1100** is hardened, it can only be removed from the surface mechanically.

## Packaging

200 liter barrel

## Shelf Life

18 months after the production date under appropriate storing conditions. Opened packages have to be stored by tightly sealing the cover, and must be used in shelf life.

## Storage

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

## Health and Safety

It is dangerous to approach 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. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret 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.

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