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Technical Data Sheet

PANADUR 2K Primer-S

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PANADUR 2K Primer-S

PANADUR 2K Primer-S is a low-viscosity, two-component primer with an epoxy resin base.

Product Benefits

- Fast recoatability
- High mechanical strength
- Easy application
- Good surface penetration

Range of Applicaions

PANADUR 2K Primer-S is used to seal normal to highly absorbent concrete and epoxy GRP materials and acts as a bonding agent for PANADUR Polyurea systems for interior and exterior use.

Technical Data

Raw material base	2 Component epoxy resin
Density PANADUR 2K-Primer-S resin (DIN EN ISO 1183-3 at 23 °C)	1.05 – 1.20 g/cm³
Density PANADUR 2K-Primer-S hardener (DIN EN ISO 1183-3 at 23 °C)	0.98 – 1.10 g/cm³
Mixture density (DIN 53217, at 23 °C)	Approx. 1.1 g/cm³
Dynamic viscosity PANADUR 2K-Primer-S resin (DIN 53019, measuring system 13, at 20 °C)	2000 - 2600 mPa·s
Dynamic viscosity PANADUR 2K-Primer-S hardener (DIN 53019, measuring system 13, at 20 °C)	40 – 90 mPa·s
Mixing ratio	See label on container
Permissible ambient temperature during processing	10 to 30 °C (non-condensing, at least 3 °C higher than the dew point, note the dew point chart)
Permissible surface temperature during processing	10 to 30 °C (to avoid condensation, keep as close to ambient temperature as possible; at least 3 °C above dew point)
Permissible material temperature during processing (both components)	10 to 30 °C
Permissible relative humidity	Max. 80 %
Consumption component mixture	Approx. 120 – 350 g/m² for each work cycle, guid-ance values, depends on substrate absorption rate
Consumption of quartz sand (diameter 0.3 – 0.8 mm; oven dried)	~ 0,8 – 1 kg/m²
Shelf life	At least 6 months (applies to unopened, original containers stored at 15 – 25 °C; avoid exposure to direct sunlight and lower temperatures, store dry, well-sealed and upright)

PANADUR GmbH
Tel.: +49 (0) 3941 6240 – 0
Fax.: +49 (0) 3941 6240 – 20
Web: www.panadur.de
E-Mail: info@panadur.de

Curing Times

Time frame for processing	At 10 °C: 1 h At 20 °C: 0.5 h At 30 °C: 0.25 h
Time frame for recoating (PANADUR 2K-Primer-S must have cured to be tack-free before)	At 10 °C: min. 24 – max. 96 h At 20 °C: min. 10 – max. 48 h At 30 °C: min. 5 – max. 24 h
Ready for light foot traffic after approx.	At 10 °C: min. 24 h At 20 °C: min. 12 h At 30 °C: min. 6 h
Ready for light loads after approx.	At 10 °C: min. 5 d At 20 °C: min. 3 d At 30 °C: min. 2 d
Ready for full loads after approx.	At 10 °C: min. 10 d At 20 °C: min. 7 d At 30 °C: min. 5 d

Note: These data are applicable at the given surface temperatures and 50 % relative humidity; times may vary at different conditions.

Physico-Chemical Properties

Color	Yellowish, transparent
VOC content (cat. II Aj Lb, limit since 2010: 500 g/l) acc. to 2004/42/EG	< 500 g/l ready to use

Processing Guidelines

General information:

Before processing starts, all provided documents must be entirely read and understood.

Preliminary tests with original materials under comparable conditions are required to ensure material compatibility and adhesion.

It is strongly recommended to keep detailed process records for every process step and the entire duration of the construction site.

It is not allowed to dilute the material with any type of additives, e.g. solvents, diluents or plasticizers.

The application has to be performed by a specialized company. If the scope is a remediation project, the application must be supervised by a qualified expert.

Uses which have not been specifically mentioned in this technical data sheet may only be performed after consultation and written confirmation by PANADUR GmbH.

Surface Preparation:

A careful preparation of the surface is absolutely essential for a durable coating.

The substrate must be sufficiently sound (compressive strength of at least 25 N/mm²; adhesive tensile strength everywhere > 1.5 N/mm²). The substrate must be stable, dry (residual moisture < 4 % CM, particularly for concrete or cementitious substrates) and free of dust, loose material, silicone, oil and grease as well.

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Cement slurry must be carefully removed from the surface. Verify the adhesion to and compatibility with old coatings (check at test areas).

If the substrate is made of hard material, which has been treated with conditioning materials, plasticizers or other chemical additives, adhesion must be checked using test areas. Otherwise adhesion problems may occur.

The substrate must be protected against rear moisture penetration during application of the product and during later use.

If the substrate is not sufficiently sound or in cases of osmosis, the substrate must be rendered sound by mechanical processing such as grinding or milling. Defects / holes have to be repaired.

Processing:

PANADUR 2K Primer-S is delivered in two separate containers as component A (resin) and component B (hardener).

Open the containers only right before the application. Mix PANADUR 2K Primer-S resin component thoroughly with appropriate technical equipment and fill the desired amount into another suitable and clean container. Immediately close the containers and use promptly. Then add PANADUR 2K Primer-S hardener component in the exact mixing ratio (see label on container) and homogenize carefully. Do not scratch the material from the container walls.

Apply Primer-S in two work cycles to obtain a continuous and completely sealed primer coating. The primer is first applied with a roller and is then vigorously worked into the surface with a brush to seal all of the pores. During the time frame for recoating, apply a second coat of primer as described above.

After the second work cycle and while the primer is still wet, evenly broadcast 0.8 – 1 kg/m² of oven dried quartz sand (diameter 0.3 – 0.8 mm) over the concrete in order to increase the surface area. Broadcast sand on vertical surfaces using compressed air.

After the primer has cured, remove the loose, excess sand first by light sweeping and then by vacuum cleaning.

If the max. processing time is exceeded, remove the sand (see above), then broadcast the quartz sand mentioned above and prime once again as described above.

Usually, sanding is not necessary when working with GRP.

Protect the primer layer from direct contact with water (e.g. dew, rain, ...) until it is recoated. Before it is recoated, PANADUR 2K Primer-S must have cured to being tack-free.

Tool cleaning:

The used tools / machinery must be thoroughly cleaned immediately after use, and, if necessary, also occasionally, depending on the system type. A proper cleaning agent must be chosen based and tested according to the used system. Please also observe the instructions of the equipment manufacturer.

Note: If the curing process has already started, it is no longer possible to clean any used tools.

Storage

Protect from heat (T > 30 °C), frost (T < 5 °C) and humidity. Already opened containers must be protected against surrounding moisture (nitrogen or argon fumigation). After fumigation, immediately close tightly and use the material promptly. Do not expose uncured components to direct sunlight. Store and transport containers upright and tightly closed.

Further information may be found in the corresponding safety data sheets.

Protective Measures

The relevant protective measures are to be followed during processing and application. These are to be determined by risk assessment. Suitable protective clothing including respiratory must be worn during processing.

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The instructions and safety advice on the containers should be observed during application. Further details may be found in our corresponding safety data sheets for each component.

Skin contact must be avoided, otherwise it may cause allergies.

GISCODE: RE 1

Please also observe the information provided by BG Bau (in German only) on how to handle epoxy resins (http://www.bgbau.de/gisbau/fachthemen/epoxi).

Further information may be found in the corresponding safety data sheets.

Environmental Information

Uncured components are harmful to aquatic organisms and may cause longer-term adverse effects in water.

Do not allow individual components and uncured material mixtures to enter water, sewers or groundwater.

Further details may be found in our corresponding safety data sheets for each component.

Important:

When handling our products, the essential physical, safety-related, toxicological and ecological data are to be taken from the appropriate material safety data sheets. Relevant provisions, such as the ordinance of hazardous substances, are to be observed.

Disclaimer:

The information above, in particular the suggestions for processing and use of our products, is based on our knowledge and experience under normal circumstances, provided that the products have been properly stored and used. Due to differences in materials and surfaces as well as diverging operating conditions, it is not possible to guarantee a particular result or to be held liable, regardless of the legal relationship, based on these references or on a verbal consultation unless we are found guilty of intention or gross negligence. In such a case, the user must prove that he/she transmitted all information in writing in a timely and accurate manner to PANADUR GmbH which was necessary for PANADUR GmbH to make an appropriate and promising assessment. The user must evaluate the suitability of a product for its intended purpose. Product specifications are subject to change. Proprietary rights of third parties must be observed. Furthermore, our respective current terms and conditions of sale and delivery apply. Only the latest version of each technical data sheet and the corresponding safety data sheets apply which are to be requested from us.

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