



PANADUR

coating your ideas



Technical Data Sheet

PANADUR 2K Primer-WDS

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PANADUR 2K Primer-WDS

PANADUR 2K Primer-WDS is a moisture compatible two-component reactive primer with an epoxy resin base.

Product Benefits

- Very good adhesion to matt damp substrates
- Easy to process
- Water vapor retardant according to the classification of DIN EN ISO 7783-2
- Very good interlayer adhesion for subsequent PANADUR polyurea coatings
- No intermediate scattering with quartz sand required

Range of Applications

PANADUR 2K Primer-WDS can be used as a reaction adhesive for PANADUR polyurea products, as a primer for concrete substrates which are still damp (see definition of "residual moisture") and as protection against the formation of osmotic blisters caused by back moisture exposure.

Technical Data

Raw material base	2 component epoxy resin
Density PANADUR 2K-Primer-WDS component A (DIN EN ISO 1183-3 at 23 °C)	Approx. 1.90 g/cm ³
Density PANADUR 2K-Primer-WDS component B (DIN EN ISO 1183-3 at 23 °C)	Approx. 1.00 g/cm ³
Density mixture PANADUR 2K-Primer-WDS (DIN EN ISO 1183-3 at 23 °C)	Approx. 1.55 g/cm ³
Dynamic viscosity of 2K-Primer-WDS component A (DIN 53019, measuring system 13, at 23 °C)	> 7000 mPa·s
Dynamic viscosity of 2K-Primer-WDS component B (DIN 53019, measuring system 13, at 23 °C)	Approx. 280 mPa·s
Mixing ratio	100 g component A : 20 g component B
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; very slow curing at 10 °C)
Permissible surface temperature for primer application	10 to 30 °C (to avoid condensation keep as close to ambient temperature as possible)
Permissible material temperature during processing	15 to 30 °C (both components)
Permissible relative humidity	Max. 75 %
Consumption component mixture	Max. 0.6 – 1.0 kg/m ² (depending on roughness of the surface)
Shelf life	At least 6 months (in the original container at 20 °C; avoid exposure to direct sunlight and lower temperatures; store tightly sealed and upright)



Curing Times

Time frame for processing	At 10 °C: 50 – 90 min At 20 °C: 35 – 45 min At 30 °C: 25 – 30 min
Time frame for re-coating	At 10 °C: min. 24 – 36 h, max. 96 h At 20 °C: min. 12 – 28 h, max. 72 h At 30 °C: min. 6 – 8 h, max. 48 h
Completely cured after approx.	At 10 °C: min. 10 d At 20 °C: min. 7 d At 30 °C: min. 3 d

Note: These data are applicable at the given surface temperatures and 65 % relative humidity; times may vary at different conditions.

Physico-Chemical Properties

Color	Light gray
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 necessary to ensure material compatibility, adhesion and a professional processing.

Depending on the substrate, 0.5 - 1.5% thixotropic agent can be added to adjust the viscosity (see processing).

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 is to be performed by a specialized company.

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.

Cement-bound substrates must be stable, dry, finely textured, pressure resistant and exhibit sufficient tensile strength. Furthermore, they have to be free of cement paste film, loose or brittle areas and of separating substances such as oil, grease, rubber marks, paint residue or the like. Usually methods such as grit-blasting, shot-blasting, high-pressure water washing, milling or sanding is necessary. Cement slurry must be carefully removed from the surface. After substrate preparation, the substrate must have a universal tear resistance of at least 1.5 N/mm². Verify the adhesion to and compatibility with old coatings (test areas).

The concrete moisture may be slightly damp, but there must be no continuous or visible water film or pore water. The temperature of the substrate must be at least 3 °C higher than the current dew point temperature.



The prepared surfaces must be primed to obtain a filled and non-porous surface. A scratch coat may be necessary to ensure that the primed surface is non-porous. Defects / holes should be repaired in advance.

The following minimum requirements must also be fulfilled based on the substrate:

- Concrete quality: at least C 20/25
- Screed quality: at least EN 13813 CT-C25-F4
- Cure time: at least 28 days
- Adhesive tensile strength: 1.5 N/mm² (minimum value > 1.0 N/mm²)
- Residual moisture: dry or matt-damp as defined in Directive SIB ("Guidelines for the protection and repair of concrete components", Part 2, Section 1.2.5 "concrete moisture")

The surface must be protected from the effects of moisture in the back during processing and later use.

Processing:

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

Depending on the substrate, the PANADUR 2K Primer-WDS component A (resin) can be mixed with 0.5% - 1.5% thixotropic agent to further increase the viscosity (see calculation example). We recommend the "Stewathix 500" thixotropic agent from SCHWARZWÄLDER TEXTIL-WERKE. A scale for the one to three-digit gram range must be used for precise weighing (e.g. kitchen scales). The thixotropic agent must be incorporated using a suitable agitator at approx. 300 rpm (e.g. drill with agitator).

Sample calculation for the sample weight:

- 10 kg – component A - adding 0,5 % Stewathix 500 → adding von 50 g Stewathix 500
 - adding 1,0 % Stewathix 500 → adding von 100 g Stewathix 500
 - adding 1,5 % Stewathix 500 → adding von 150 g Stewathix 500

Open the containers only right before the application. Add PANADUR 2K Primer-WDS component B to the PANADUR 2K-Primer-WDS component A, since both components are supplied in the correct mixing ratio (see container label and technical data in the technical data sheet). It must be ensured that the PANADUR 2K Primer-WDS component B runs completely out of the container. The two components must be mixed with a suitable agitator at approx. 300 rpm (e.g. drilling machine with agitator). It is important to stir from the sides and bottom so that the components are evenly distributed. The mixture is stirred until the mixture is homogeneous (streak-free). The mixing time is approx. 3 minutes. The mixed homogeneous material cannot be processed from the delivery container. Pour the mass into a clean container and stir again carefully to avoid mixing errors at the edge and surface of the container.

Close the component containers immediately after opening and consume them quickly.

The PANADUR 2K Primer-WDS is applied to the prepared substrate to close the pores. The processing can be done with a rubber lip slide for even distribution and then with a fur roller for reworking. It is recommended to apply the primer in two layers to ensure the necessary pore closure.

When used as an exterior coating, care must be taken to protect the material from moisture for a sufficient period of time after application. If moisture penetration occurs too soon, the material may turn white or become tacky and significantly impair adhesion to the following coating, which in turn may require removal of the coating by sand-blasting.

Due to the influence of UV radiation a change in the color of the product is possible due to its epoxy base. This does not affect the technical properties.

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 material from temperatures $> 30\text{ }^{\circ}\text{C}$, low temperatures ($T < 10\text{ }^{\circ}\text{C}$) and humidity. 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 must be observed during processing and application. These are to be determined by risk assessment. Suitable protective clothing including respiratory mask must be worn during processing.

Wear appropriate safety equipment (clothes, gloves), when handling the material. After contact with skin, rinse with soap and lots of water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. An appropriate ventilation is essential. If the ventilation is not sufficient, wear a fresh air mask. Avoid inhalation and skin contact with vapors.

Do not eat, smoke or handle open fire during processing.

Avoid skin contact!

In general, the hazard warnings and safety advice should be observed and complied with as provided on the container, in the safety data sheet and in the relevant provisions from professional associations.

PANADUR 2K Primer-WDS is physiologically non-hazardous after curing.

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>).

The instructions and safety advice on the containers should be observed during processing. 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.