



PANADUR

coating your ideas



Technical Data Sheet
PANADUR 2K Primer-WDS

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PANADUR 2K Primer-WDS

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

Product Benefits

- Binds extremely well to damp substrates
- Sprayable
- Easy to mix
- Water vapour barrier acc. to DIN EN ISO 7783 classification
- Excellent intercoat adhesion for subsequent PANADUR polyurea coatings
- Does not require sanding

Range of Applications

PANADUR 2K Primer-WDS is used:

- as a reactive primer for PANADUR polyurea products
- for horizontal, vertical and "overhead" application
- as a primer for concrete substrates which are still damp, (see definition "residual moisture")
- to protect against the formation of osmotic blisters caused by rising moisture

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. 1.70 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. 1.5 g/cm ³
Dynamic viscosity of 2K-Primer-WDS component A (DIN 53019, measuring system 13, at 20 °C)	> 5500 mPa·s, paste-like
Dynamic viscosity of 2K-Primer-WDS component B (DIN 53019, measuring system 13, at 20 °C)	Approx. 290 – 470 mPa·s
Mixing ratio	See label on container
Permissible ambient temperature during processing	8 to 30 °C (non-condensing, at least 3 °C higher than the dew point, note the dew point chart)
Permissible surface temperature for primer application	8 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)	15 to 30 °C
Permissible relative humidity	Min. 40 % - max. 75 % at 10 °C, max. 80 % at 23 °C



Consumption component mixture	Approx. 0.6 – 1.0 g/m ² (depending on roughness of the surface)
Shelf life	6 months (in the original container at 15 to 25 °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: 20 – 30 min
Time frame for re-coating	At 10 °C: min. 24 – 36 h, max. 96 h At 20 °C: min. 12 – 16 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 50 % relative humidity; times may vary at different conditions.

Physico-Chemical Properties

Color	Grey
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 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 is 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.

Cement-bound substrates must be stable, dry¹, 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

¹ Residual moisture of cementitious substrates: dry or wet (according to the German directive RiLi SIB).



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 measured and documented concrete moisture of the surface must not exceed < 4 % CM². The temperature of the substrate must be at least 3 °C higher than the current dew point temperature.

Note: The surface of the substrate must not have a continuous or visible film of water or pore water.

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 using a filling compound that has been recommended by PANADUR.

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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 (surface is matt, substrate is damp) acc. to DAfStb directive 2

Rear moisture penetration must be excluded during application of the product and during later use.

Processing:

PANADUR 2K Primer-WDS 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-WDS component A thoroughly with appropriate technical equipment, fill the desired amount into another suitable and clean container. Immediately close the containers and use promptly. Then add PANADUR 2K Primer-WDS component B in the exact mixing ratio (see label on container) homogenize carefully. Fill into a second container and homogenize thoroughly to prevent mixing errors at the containers surface.

Evenly apply PANADUR 2K Primer-WDS to the prepared and cleaned substrate which is either dry or matt-damp to ensure all pores are closed off. For horizontal surfaces, it is recommended to first evenly distribute PANADUR 2K Primer-WDS with a rubber squeegee. Then thoroughly work the product into the surface using a primer brush and finish the surface with a napped roller.

On vertical or "overhead" surfaces, it is recommended to apply PANADUR 2K Primer-WDS with airless equipment and to then thoroughly work the product into the surface using a primer brush or soft, wide brush and to then finish the surface using a napped roller. If applying the product by hand, first apply an even coat using a short-pile roller. Then thoroughly work the product into the substrate as described above.

To provide optimal deaeration and spread of the primer, each layer should be reworked with a spiked roller immediately after application.

To ensure all pores are closed by the application of a second layer is recommended. The second layer is applied with a roll after the first primer coat is dust dry (see Curing Times).

If pressing water penetration is a risk, apply PANADUR 2K Primer-WDS twice to seal small pores. The second layer is applied with a roll after the first primer coat is dust dry (after 8 - 10 hours at the earliest, verify that it is dust dry, also see Curing Times).

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. The material below this coat is able to cure fully.

² "Protection and Repair of Concrete Building Materials", Part 2, Section 1.2.5 "Concrete Moisture".

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 $> 30\text{ °C}$, frost ($T < 5\text{ °C}$) 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 vapours.

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.

