



PANADUR

coating your ideas



Technical Data Sheet
PANADUR 2K Primer-AF

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PANADUR 2K Primer-AF

PANADUR 2K Primer-AF is a solvent based two-component primer. It is distinguished by its excellent filling capability and corrosion protection and is also easy to sand.

Range of Applications

The zinc phosphate based primer PANADUR 2K Primer-AF is used on particle-blasted structural steel surfaces and clean stainless steel surfaces (Cr/Ni), that are to be coated with a PANADUR Polyurea coating.

Technical Data

Raw material base	Hydroxy-functionalised polyacrylate, cross-linked with polyisocyanate
Density of PANADUR Primer-AF (DIN EN ISO 1183-3 at 23 °C, value for light grey, depends on color)	1.6 – 1.8 g/cm ³
Density of PANADUR Hardener NDN 65 (DIN EN ISO 1183-3 at 23 °C)	Approx. 1.0 g/cm ³
Viscosity of PANADUR Primer-AF (DIN 53019, measuring system 13, at 20 °C, values for light grey, depends on color)	1500 - 1700 mPa·s
Viscosity of PANADUR Hardener NDN 65 (DIN 53019, measuring system 13, at 20 °C)	Approx. 50 mPa·s
Volume solids (ready to use)	Approx. 65 – 70 %
Mixing ratio	See label on container
Permissible processing temperature range	10 to 35 °C (non-condensing, at least 3 °C higher than the dew point, rel. humidity < 90 %, note the dew point chart)
Permissible surface temperature for application	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	15 to 25 °C
Consumption component mixture	100 - 140 g/m ² , with a 60 µm film thickness, guidance values (depends on the substrate)
Recommended film thickness	60 – 130 µm
Shelf life	Stable for at least 6 months (applies to unopened original containers stored at 20 °C; protect from direct sunlight, lower temperatures and humidity; store containers upright and tightly closed)



Curing Times

Time frame for processing	60 min
Time frame for re-coating (after application, solvent must evaporate completely)	min. 0,5 h – max. 16 h
Dust dry after approx.	30 min
Abradable after approx.	1 h
Completely cured after approx.	36 h

These data refer to 23 °C / 50 % relative humidity; times may vary at different ambient conditions.

Physico-Chemical Properties

Color	Red-brown, light grey (further colors available upon request)
Gloss level 60° (DIN EN ISO 2813)	Matt

Processing Guidelines

General information:

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

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.

Preliminary tests with original materials (especially stainless steel Cr/Ni) under comparable conditions are necessary to ensure material compatibility and adhesion. Adhesion should be tested after four weeks at the earliest in order to receive definite values.

It is absolutely necessary to keep detailed process records for every process step and the entire duration of the construction site, especially equipment maintenance logs (material temperatures and pressures, mass output during processing and measuring equipment tracing) and listed data for processing conditions (temperature deviations and air moisture). In addition the correct operation of the 2K system measuring devices are checked regularly and documented in a verifiable manner.

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 following applies in general: See German VOB, Part C, DIN 18363, section 3.

The substrate to be coated must be properly and professionally prepared. After preparation, the surface must be sound, clean and dry. It must be free of rolling skin, rust, oil, grease, scale, oxidation products as well as substances that prevent adhesion (e.g. silicones, release agents). Before coating, prepare the substrate using a suitable method, such as sanding, blasting or Blastrac shot blasting to a standard grade of cleanliness of Sa 2 ½ (in accordance with DIN EN ISO 8501-1). Wipe the surface with a clean, lint-free cloth that has been soaked in PANADUR Silicone Remover and then immediately rub the surface dry with a second clean, lint-free cloth.

Sand blasted surfaces of steel tend to build flash rust when exposed to humid air, what makes a treatment with PANADUR Citrasol necessary. PANADUR Citrasol solution is to be applied by spraying or dipping. Allow to react for 10 minutes. Then wipe surface with a lint-free cloth and dry carefully. Afterwards the surface has to be coated immediately.



Processing:

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

PANADUR 2K Primer-AF is applied with a gravity spray gun or suction spray gun using airless or airmix equipment. When using airless or airmix equipment, observe the instructions for use from the system manufacturer.

PANADUR 2K Primer-AF can also be applied with a brush or roller.

Open the containers only right before the application. Homogenize PANADUR 2K Primer-AF directly before use with appropriate technical equipment and fill the desired amount into another suitable and clean container. Immediately close the containers after opening and use promptly. Then add PANADUR Hardener NDN 65 in the exact mixing ratio (see label on container) and homogenize carefully. Do not scratch the material from the container walls.

To obtain necessary viscosity for spraying add PANADUR Thinner BX 55. It may be necessary to remix right before use.

1st spraying process: Completely spray the surface with 1 to 2 crosscoats as needed to build up to the desired film thickness.

Recommended parameters for a cup gun:

Film thickness	Approx. 60 µm	Approx. 130 µm
Spray pressure	2.5 – 3.5 bar	3.5 – 4.5 bar
Nozzle diameter	1.4 mm	2.0 mm
Addition of PANADUR Thinner BX 55)	0 – max. 20 %wt.	Not necessary

Protect the primer layer from direct contact with water (e.g. dew, rain...) until it is recoated.

Recoatibility:

At an ambient temperature of 23 °C with 50 % relative humidity, it is possible to recoat without sanding for up to 16 hours after applying the last layer. The last layer has to be completely dry before recoating.

Note: With PANADUR Polyurea products a wet-in-wet application is not possible.

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 started, it is no longer possible to clean any used tools.

Supplemental Products

- PANADUR Silikone remover
- PANADUR Citrasol
- PANADUR Thinner BX 55

Storage

Protect from heat (T > 30 °C), frost (T < 5 °C) and humidity. 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

Both components are flammable.

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

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.

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.

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