D2 Airfield Protect EP 1000

Universal 2-component epoxy resin primer for thermosetting coatings, type D2 according to construction industry standards
Directive for Air Traffic Facilities (BFR 9021)

PRODUCT DESCRIPTION	D2 Airfield Protect EP 1000 is an unfilled 2-component epoxy resin primer used in the system for D2 coatings on air traffic surfaces in accordance with BFR 9021. Due to its low viscosity and good wetting properties, the resin penetrates very well into the mechanically prepared substrate, thus providing a high-strength base for the subsequent D2 coating. D2 Airfield Protect EP 1000 has been tested against moisture penetration from the back and exhibits high chemical resistance to kerosene, aviation gasoline, brake fluids, oils, and formates (de-icing fluids), making it specifically designed for the demanding conditions of air traffic control facilities. For applications with specific resistance requirements, please consult a specialist. The product contains no free bisphenol A and no alkylphenols.
SCOPE	- As a primer and scratch coat before applying D2 Airfield Protect EP 2000 for the construction of a D2 surface (according to BFR 9021). - Priming and scratch coating of concrete substrates on taxiways and airport aprons.
PRODUCT FEATURES	- "Total Solid" according to GISCODE (testing method German Construction Chemicals) - good interlayer adhesion - very economical
EXAMS	External and internal audit certificates are available for the following results: Test report (system test): Testing according to the "Construction Guidelines for Air Traffic Facilities (BFR 9021) (Edition 1999) – Surface Protection Layers of Airfield Surfaces" (Requirement: D2 coating) Suitability against rear-side moisture exposure according to DAfStB guidelines or TR-Maintenance.

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	A notice: Please inquire about the verified system setup!
PANEL STRUCTURE	Substrate preparation by shot blasting or milling and subsequent shot blasting, then thorough cleaning vacuum. Apply D2 Airfield Protect EP 1000 primer using a squeegee, rubber squeegee, spatula, or nylon roller. Consumption is approximately 0.35 to 0.45 kg/m². To achieve a uniformly closed surface, roll over it again with a nylon roller. Optional scratch coat application for increased surface roughness to create a flat, non-porous subsoil, with D2 Airfield Protect EP 1000 and KLB mixed sand 2/1 in a mixing ratio of 1 : 0.8 parts by weight, Consumption of mixture approx. 0.8 to 1.2 kg/m². Complete sanding of the primer or optional scratch coat with Quartz sand, grain size 0.3/0.8 mm, consumption at least 4.5 kg/m2. For further information on the construction of D2 pads, see the product information from D2 Airfield Protect EP 2000 and D2 Airfield Protect WP 3000 or 3001.
SUBGROUND	The substrate to be coated must be level, dry, dust-free, sufficiently strong in both tensile and compressive strength, and free of weakly adhering components and flaking. Substances that impair adhesion, such as grease, oil, and paint residues, must be removed beforehand using appropriate methods. Suitable substrates for coating are concrete C30/37 (exposure class XD1) or C35/45 (exposure class XD3). The substrates must possess sufficient strength for the intended use. The substrates to be coated must be prepared mechanically, by milling, or Shot blasting is required. The absorbency must be checked. The surface strength must be at least 2.0 N/mm². The moisture content of concrete must not exceed 4.5 CM-%. Backward moisture penetration must be permanently prevented.

MIX	For combination containers, the factory-weighed material is present in the exact mixing ratio in one working pack. The container of component A has sufficient volume to hold the entire quantity. Empty the hardener B completely into the resin container A. For drum deliveries, both components are in the correct ratio. Weigh the correct amount of resin/hardener into a clean container. Mixing should be done mechanically with a slow-speed mixer (200 to 400 rpm) for 2 to 3 minutes, until a homogeneous, streak-free mixture is achieved. To avoid mixing errors, it is recommended to always transfer the resin/hardener mixture to a clean container and mix briefly again. (“Repotting”). Manufacturing mortars Epoxy resin mortar: 1.0kg D2 Airfield Protect EP 1000 8.0 - 12.0 kg mixed sand When adding aggregates, the binder must be premixed, then the aggregate added. The amount of mixed sand added depends on the desired consistency and strength.
PROCESSING	For priming, apply immediately after mixing using a rubber squeegee, scraper, spatula, or nylon roller. Apply the material in an even, continuous layer to the substrate. Check consumption. Observe the requirements for the subsequent layer; for example, D2 Airfield Protect EP 2000 requires a complete sanding with kiln-dried quartz sand with a grain size of 0.7/1.2 mm. The temperature of the soil and air must not fall below 10 °C, and the relative humidity must not exceed 75%. The temperature difference between the soil and air temperature should be less than 3 °C to ensure proper curing. If dew occurs, regular curing cannot take place. Hardening problems and staining may occur. The stated curing times refer to 20 °C; at lower temperatures, processing and curing times will increase, and at higher temperatures, they will decrease. If the processing conditions are not met, deviations may occur. from the described technical characteristics of the final product.
CLEANING	Use Cleaner G to remove fresh soiling and to clean tools immediately after use. Hardened material can only be removed mechanically.

STORAGE	Store in a dry, frost-free place if possible. Ideal storage temperature is 10 to 20 °C. Bring to the appropriate processing temperature before use. Tightly reseal opened containers and use as soon as possible.
SPECIAL INSTRUCTIONS/PROTECTIVE MEASURES	The product is subject to the Hazardous Substances Ordinance, the Industrial Safety Ordinance, and the transport regulations for dangerous goods. The required information is contained in the DIN safety data sheet. Check the labeling information on the container label! GISCODE: RE90 VOC content labeling: (EU Regulation 2004/42) Limit value 500 g/l (2010,II,j/lb): Product contains < 500 g/l VOC in its processed state.

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TECHNICAL DATA *

TECHNICAL SPECIFICATIONS	UNIT	VALUE
Viscosity - Component A+B	mPas	Approximately 600
solids content	%.	> 99
Density - Component A+B	kg/l	Approximately 1.09
Tensile adhesion strength	N/mm²	> 2.0
Shore hardness D		80

Mixing ratio parts by weight	A : B = 100 : 47
Mixing ratio, parts by volume	A : B = 100 : 51
Processing time	10 °C : 45 min. 20 °C : 30 min. 30 °C : 15 min.
Processing temperature	Minimum 10 °C (air and ground temperature)
Curing time (walkability)	10 °C : 16 - 20 hrs. 20 °C : 12 - 15 hrs. 30 °C : 8 - 12 hrs.
Hardening	2-3 days until mechanical stress resistance is reached at 20°C 7 days until chemical resistance at 20 °C
consumption	Primer: 0.35 - 0.45 g/m² depending on the roughness of the substrate
durability	12 months (original sealed)

*These figures are guidelines only. They are not intended for creating specifications.

The data were obtained at +23°C and 50% relative humidity. Higher temperatures and/or higher relative humidity may shorten or lengthen these times. All technical data, dimensions, and information in this datasheet are based on laboratory tests. Actual measured data may differ in practice.