

2C PUR High Solid Primer 5703

High-solid content, quick-drying polyurethane primer with excellent corrosion protection properties



Field of application

In the coating build-up (see coating recommendations), corrosion-protective and weather-resistant coatings are produced for a wide range of applications, e.g. structural elements/profiles (steel and aluminum), construction and agricultural machinery, fittings, furniture (indoor), garage doors, garden furniture and equipment, shop and trade fair designs, machines, engines, drives, commercial vehicles, radiators, steel containers, doors, frames, vending machines and residential and construction containers.

Properties

- Quick drying
- Outstanding corrosion protection
- Excellent stability with good leveling characteristics
- Good filling power
- Easy to sand
- High yield
- VOC reduced
- High mechanical resistance
- Can be painted over with Brillux 2C paints and synthetic resin coatings

Material description

Basis	Combination of hydroxypolymers and aliphatic polyisocyanate
Color shades	Beige, red-brown, light gray, white and black The color shade white is available at short notice via the quick-delivery service.
Gloss grade	Matt
Density	1.61-1.63 g/cm ³ ¹⁾ (in accordance with DIN EN ISO 2811)
Solids content	74-76 wt % ¹⁾
Theoretical yield	320-340 m ² /kg ¹⁾²⁾ (with 1 µm dry layer)

Material description

Delivery viscosity at 20°C	450–500 mPas 50–60 sec./DIN 6 mm
Stability	150-200 µm dry film thickness in one work step (20°C / 65% relative humidity)
electrical resistance	100–1,000 kΩ ²⁾ (Ransburg probe)
Salt spray test	Corrosion on the crack ≤ 1.5 mm (in accordance with DIN EN ISO 4628-8) ≥ 480 h on SA 2 ½-blasted steel (in accordance with DIN EN ISO 9227-NSS) ³⁾
Condensation water test	Degree of blistering 0 (S0) (in accordance with DIN EN ISO 4628-2) ≥ 480 h on SA 2 1/2-blasted steel (in accordance with DIN EN ISO 6270- 2) ³⁾
Flash point	> 23°C
Labeling	See current safety data sheet.

¹⁾ Dependent on the color shade

²⁾ in mixture

³⁾ in build-up with recommended top coat systems according to coating recommendation

Coating recommendation

Substrates ⁴⁾	Prime coat	Intermediate coat	Top coat
Steel Preferably sand-blasted (degree of cleanliness min. SA 2 ½ in accordance with DIN EN ISO 12944, part 4), iron or zinc- phosphated. Cast Galvanized steel Aluminum Non-ferrous metals Among others	2C PUR High Solid Primer 5703 40–80 µm	If necessary (layer thickness specification), a second layer (40-80 µm) can be applied with the aforementioned primer.	2C PUR High Solid Paint 5730, 5731, 5732, 5733, 5736, 5737 40–80 µm
			2C PUR Acrylic Paint 5740, 5741, 5742, 5743, 5744, 5746, 5747, 5748, 5749 40–80 µm
			Hydro 2C PUR Paint 5860, 5861, 5862, 5863 40–60 µm
			Synthetic resin varnish 5460, 5461, 5462 30–50 µm

⁴⁾ The substrate must generally be free of fats, oils, separating and drawing agents, as well as dirt and corrosion products including impurities.

Coating recommendation based on DIN EN ISO 12944

(tested on low-alloy steel, surface preparation degree: SA 2.5; raw depth: Medium to high (25–60 µm))

Corrosivity category	C2			C3			C4			C5		
	low	med.	high	low	med.	high	low	med.	high	low	med.	high
Protection time in years	2–5	5–15	> 15	2–5	5–15	> 15	2–5	5–15	> 15	2–5	5–15	> 15
Constant climate test (h)	48	48	120	48	120	240	120	240	480	240	480	720
Salt spray test	-	-	-	120	240	480	240	480	720	480	720	1440
2C PUR High Solids Primer 5703 (80 µm) + 2C PUR High Solid Paint 5730-5733 (80 µm) ⁵⁾	C2 L	C2 M	C2 H	C3 L	C3 M	C3 H	C4 L	C4 M	C4 H	C5 L		

⁵⁾ Alternatively, 2C PUR Acrylic Paint 5740-5743 can be used instead of 2C PUR High Solid Paint 5730-5733 with the same result.

Hardener

PUR Hardener 5770.-.0010 (standard curing)

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Basis Aliphatic polyisocyanate

Shelf life 6 months after receipt of goods.
Store in a sealed container in a dry place and at room temperature (max. 25°C). Protect from heat sources and direct sunlight.

Minimum shelf life Refer to label

Mixing ratio 8 : 1 wt% (5.3 : 1 vol%)

Mixing Base paint and hardener are supplied separately as a two-component system, and these are mixed homogeneously in the specified mixing ratio shortly before application.

Use

Stir the material homogeneously before application.

Dilution PUR Thinner 5103 (volatile)
Stir the material homogeneously before application.

Accelerator 2C PUR Primer Accelerator 5136.-.0020 in medium volatile solvent with accelerating drying effect, primarily suitable for 2C PUR High Solid Primer 5703 and 2C PUR Acrylic Primer 5705. When using the 2C PUR Primer Accelerator, the pot life of the above-mentioned paint systems is shortened (see table).
Recommended quantity added: 5%

Quantity added	5%	7%	10%
Pot life	1.5 h	1.0 h	< 45 min.

Distribute homogeneously while stirring.

Pot life 2–3 h (at 20 °C)

Application temperature > 5°C object temperature (3°C above the dew point)

Humidity < 80% relative humidity

Use

Application procedure	Airless spraying, air mix spraying, air spraying, electrostatic spraying.
Compatibility	Can only be combined with the hardeners, thinners and primers specified in this technical data sheet.

Drying

Air drying (at + 20°C, 65% relative humidity)	dust dry	(TG 1)	after 20–30 minutes
	can be painted over		after 30–60 minutes
	non-tacky	(TG 3)	after 2–3 hours
	dry to touch	(TG 4)	after 5–6 hours
	cured		after 6–8 days

Oven drying Maintain the flash-off time for 20–30 minutes. Then force-dry the coating for approximately 30 minutes at an object temperature of approximately 60°C.

It is only possible to dry or cross-link the applied paint film at temperatures above + 5°C. The drying time decreases with the temperature increase.

Spray data

Method	Nozzle opening	Pressure	Application consistency
Airless spraying	0.23–0.33 mm	120–180 bar (material)	40–60 sec. ⁶⁾
Air-Mix spraying	0.23–0.33 mm	120–150 bar (material) 1–3 bar (air)	40–60 sec. ⁶⁾
Air spraying	1.5–1.7 mm	4–5 bar	30–40 sec. ⁷⁾
E-static spraying	0.23–0.33 mm	120–150 bar (material) 1–3 bar (air) approx. 60 kV (electrical voltage)	30–40 sec. ⁷⁾

⁶⁾ measured in a DIN 6 mm flow cup (in a mixture)

⁷⁾ measured in a DIN 4 mm flow cup (in a mixture)

Container sizes

30 kg

Shelf life

24 months after receipt of goods.

Store in a sealed container in a dry place and at room temperature (max. 25°C). Protect from heat sources and direct sunlight. Always keep the containers tightly sealed. Protect the contents from drying out. Dried paint residues and any surface-dried skin are insoluble in the paint and can only be removed by straining.

Minimum shelf life Refer to label

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