

Dencryl™ B22

Reactive, impact-resistant resin with low-temperature flexibility for self-levelling coatings

Description

Dencryl™ B22 resin is a solvent-free, 2-component methacrylic resin of high impact resistance and low-temperature flexibility whose highly-molecular structure makes it outstandingly suitable for self-levelling coatings subject to extreme stresses, predominantly outdoors or for cold stores. Coatings made from **Dencryl™ B22** resin are durably elastic and able to crack bridging.

Dencryl™ B22 resin is characterized by outstanding impact resistance. Its high elasticity ensures lasting crack bridging, so that substrate movements can be better absorbed. The good low-temperature flexibility improves its behaviour outdoors in the event of changes in climate or load stresses on bridge roadways or in cold stores. Because of the high viscosity, the coarse particles of the filler remains longer in the self-levelling recipe suspension, so that no separation between fine and coarse particles occurs within the flooring (particle homogeneity). This has a further beneficial effect on crack bridging.

When combined with fine filler, **Dencryl™ B22** resin can also be used as a 1 – 1.5 mm membrane underneath normal flooring systems of **Dencryl™ B21, B23 or B24** resin in order to improve impact resistance and crack bridging (tight to liquids).

Application

Dencryl™ B22 resin is used as a binder in manufacturing various coating types and recipes. Indoors it can be coated on the following substrates: concrete, screed, ceramic tiles, asphalt and steel. Outdoors **Dencryl™ B22** resin, like all other **Dencryl™** resins, must not be laid on asphalt surfaces because otherwise cracks may be expected to form, particularly on large surfaces. The various substrates must be primed in accordance with our general recommendations (see literature on substrates).

Membrane coat

Dencryl™ B22 resin must always be applied to a minimum thickness of 1 mm. Mixtures in a ratio of 2 : 1 to 3 : 1 with **Dencryl™ Filler** have proven

to be most suitable. Membrane coats must not be sanded over their full area before being covered with **Dencryl™ B21, B23 or B24** resin self-levelling coatings. Membrane coats are advisable e. g. on blasted sheet steel, critical substrates or if there are particular mechanical stresses.

Main coat

For the main coat, a differentiation must be made between two filler recipes. The finer is used in the manufacture of thinner toppings of 2 – 4 mm, the coarser for thicker coats of 4 – 7 mm. The recommended sand sprinkling of **Dencryl™ Filler** 0.7 – 1.2 mm, FS or FM 0.7 – 1.2 mm is absolutely essential, as this ensures the surface straining point stress. Dried basalt chippings or coarse quartz sand is also suitable for sprinkling over areas subject to traffic.

1. Scratch slurry (Use in systems B, C, D)

Guideline recipe and batch quantities

Item	Component	Guideline recipe (% by weight)	Comments	Batch for 30 litre bucket
1	Dencryl™ B22	35 %		13.5 kg 13.5 litres
2	Dencoat™ Floor Filler	65 %		25.0 kg Approx. 18 litres
	Total:	100 %	Average consumption: 1.6 kg/m² per mm thickness	38.5 kg Approx. 24 litres
3	Dencryl™ Hardening Powder	1 – 6 % related to item 1	See "Hardener dosages" table for quantities, C	135 – 810 g

2. Self-levelling coating 2 – 4 mm (Use in system D or as scratch slurry)

Guideline recipe and batch quantities

Item	Component	Guideline recipe (% by weight)	Comments	Batch for 30 litre bucket	
1	Dencryl™ B22	35 %		14 kg	14 litres
2*	Dencoat™ Floor Filler	65 %	1 sack	25 kg	approx. 22 litres
Total:		100 %	Average consumption: 1.6 kg/m² per mm thickness	39 kg	approx. 24 litres
3	Dencryl™ Hardening Powder	1 – 6 % related to item 1	See "Hardener dosages" table for quantities	140 – 840 g	

For thin outdoor applications of 2 – 3 mm thickness please use 50/50 resin/filler mixtures with full quartz broadcast. **Dencryl™ Filler** is recommended.

3. Self-levelling coating 4 – 7 mm (Use in system D)

Guideline recipe and batch quantities

Item	Component	Guideline recipe (% by weight)	Comments	Batch for 30 litre bucket	
1	Dencryl™ B22	30 %		16 kg	16 litres
2	Dencoat™ Floor Filler	70 %		35 kg	approx. 29 litres
Total:		100 %	Average consumption: 1.7 kg/m² per mm thickness	51 kg	approx. 30 litres
3	Dencryl™ Hardening Powder	1 – 6 % related to item 1	See "Hardener dosages" table for quantities	160 – 960 g	

Special advice:

Because of the high elasticity, no hard materials may be used as the overcoat. If a hard top coat is nevertheless required for reasons of resistance to chemicals, e. g. **Dencryl™ S34** resin, the surface must be pre-sealed with a semielastic intermediate sealant (e. g. **Dencryl™ S31** resin). Extremely high spot stresses may result in slight indentations in the surface, but these are largely reversible.

Characteristics of Dencryl™ B22 as delivered

Property	Measuring method	Approx. value
Viscosity at +20°C	DIN 53 015	1000 mPa·s
Flow time at +20°C, 4 mm cup	ISO 2431	135 – 165 sec.
Density D ₄ ²⁰	DIN 51 757	0.98 g/cm ³
Flash point	DIN 51 755	+10°C
Pot life at +20°C (100 g, 2 % pbw. hardening powder)		approx. 15 min.
Application temperature		+5°C to +30°C


Characteristics of the self-levelling coating 4 – 7 mm

Property	Measuring method	Approx. value
Compressive strength	DIN 1164	25 N/mm ²
Tensile strength in bending	DIN 1164	15 N/mm ²
Specific weight		1.7 g/cm ³

Hardener dosages

Temperature	Hardening powder % pbw. *	Pot life approx. min.	Hardening time approx. min.
+5°C	6.0	20	60
+10°C	4.0	15	40
+15°C	3.0	15	40
+20°C	2.0	15	40
+25°C	1.5	12	30
+30°C	1.0	10	25

* The quantity of hardening powder is always related to the quantity of resin.

	
DenCoat · Calle Paraguay 14/2 · 35204 Vigo · Pontevedra · Spain	
10 ¹⁾	
B22 - 001	
EN 13813 SR-AR1-B1,5-IR4	
Synthetic resins for internal uses (Application in accordance with the newest technical information)	
Reaction to fire:	E _{fl}
Release of corrosive substances (Synthetic Resin Screed):	SR
Water permeability:	NPD ²⁾
Wear resistance (Abrasion Resistance):	AR 1 ³⁾
Bond strength:	B 1,5
Impact resistance:	IR 4
Sound insulation:	NPD ²⁾
Sound absorption:	NPD ²⁾
Thermal resistance:	NPD ²⁾
Chemical resistance:	NPD ²⁾

CE-labelling

- 1) Last two digits of the year in which the ce marking was affixed.
- 2) NPD = No performance determined.
- 3) Refers to a smooth surface without broadcasting.

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