

SILIKAL® RU 380 Resin

Reactive medium-viscosity primer for absorbent and non-absorbent substrates as well as thin coatings



Properties

- Universal primer with good adhesion on concrete, cement screed, asphalt as well as tiles and metals
- Rapid curing even at low temperatures
- SILIKAL® RU 380 Resin can also be used for thin coatings

Areas of application

SILIKAL® RU 380 Resin is a universal medium-viscosity, solvent-free 2-component methacrylate resin system with good adhesion on concrete, cement screed, asphalt as well as tiles and metals such as untreated steel, stainless steel (V2A), aluminium, galvanized sheet metal and other nonabsorbent substrates.

Advice on application

General

Tack free curing and adhesion of SILIKAL® RU 380 Resin has to be tested in advance on every surface ($\geq 50 \text{ cm} \times 50 \text{ cm}$).

The necessary quantity of hardener must be adjusted to the substrate temperature of the building. For the exact quantities, please refer to the table "Hardener dosages". You must not dose less than the given quantity of hardening powder, as this will jeopardize the curing process. You must also avoid overdosing the hardening powder, as this will lead to a softer and more yellow product, respectively curing problems will occur. The material must be applied as soon as the hardening powder has been dissolved in the resin component. The mixing time is about 2 minutes. SILIKAL® RU 380 Resin must be completely cured before any further coat can be applied.

SILIKAL® RU 380 Resin reaches its final physical properties in terms of compressive strength, final adhesion etc. after a post-reaction period which may last several hours.

Non-absorbent cementitious substrates

Once the substrate has been inspected, it typically needs to be pre-treated. The surfaces must be dry, firm, load-bearing as well as free of dust, oil, grease and other substances which could act as a separation-layer.

Absorbent cementitious substrates

Once the substrate has been inspected, it typically needs to be pre-treated. The surfaces must be dry, firm and load-bearing and also free of dust, oil and grease and other substances which could act as a separation-layer. Appropriate batch quantities should be chosen that a good penetration of the substrate is guaranteed within the pot life of the material. The material must be applied as soon as the hardening powder has been dissolved in the resin component. SILIKAL® RU 380 Resin must be applied evenly without leaving puddles by means of a paint roller or brush. If squeegees are used, the surface must always be rolled with a paint roller afterwards. Matt and heavily absorbent patches must be reprimed wet in wet before hardening until the pores are closed up. Resin consumption is about 0.4 kg/m^2 . SILIKAL® Filler QS 0.7 – 1.2 mm can be sprinkled loosely into the fresh primer coat.

Asphalt

The asphalt should be dry and free of dust and oil. New bituminous surfaces should have been weathered for more than 6 weeks, otherwise adhesion can be impaired and discolouration can occur. In rare cases bitumen with high contents of short chained oils may have been used. In this case the liquid component of SILIKAL® RU 380 Resin will be soaked up by the bitumen and the curing will fail. Therefore preliminary coating trials need to be conducted.

Metals/tiles

Steel substrates must be derusted and prepared to SA 2.5 in accordance with DIN 55929. Non-ferrous metals and tiles must be cleaned and prepared by sanding down or blasting. Processing is performed using a short-pile solvent-resistant paint roller.

If the determined tensile bond values on extremely smooth substrates (such as glazed tiles) are insufficient, 0.3% by weight of SILIKAL® Additive M, relative to the quantity of resin, can be added to improve the adhesion. This requires additionally increasing the hardening powder added by 1% by weight. SILIKAL® Additive M must not be added until immediately before application.

Thin coating

By adding Silikal fillers and Silikal pigment powders, SILIKAL® RU 380 Resin can be used as a thin coating (s.b.). For the application we recommend using short-pile plush mohair rollers.

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Expect more from your floor.

1. Priming

(Use in systems A – D)

Item	Component	Guideline recipe (% by weight)	Comments	Batch for 10 litre bucket	
1	SILIKAL® RU 380 Resin	100%		10 kg	10 litres
	Total:	100%	Average consumption: approx. 300 – 400 g/m²	10 kg	10 litres
2	SILIKAL® Hardening Powder	1.0 – 4.5% related to item 1	See “Hardener dosages” table for quantities	100 – 450 g	

2. Thin coating

(Use in system A)

Item	Component	Guideline recipe (% by weight)	Comments	Batch for 10 litre bucket	
1	SILIKAL® RU 380 Resin	65.0%		6.5 kg	6.5 Ltr.
2	SILIKAL® Filler QM	30.0%		3.0 kg	approx. 0.8 Ltr.
3	SILIKAL® Pigment	5.0%		0.5 kg	
	Total:	100%	Average consumption: approx. 500 – 600 g/m²	10 kg	approx. 7.3 Ltr.
4	SILIKAL® Hardening Powder	1.0 – 4.5% related to item 1	See “Hardener dosages” table for quantities	65 – 292 g	

The thin coating can be sprinkled with coloured flakes, natural sand or coloured sand while still fresh. After curing of SILIKAL® RU 380, an appropriate sealant can be applied. For the usage in a unicoloured system, we recommend sealing with transparent SILIKAL® R 82 Resin to make the thin coating easier to clean and improve its mechanical stability (scratch resistance).

Characteristics of RU 380 as delivered

Property	Measuring method	Approx. value
Viscosity		180 – 250 mPa · s
Density D ₄ ²⁰	EN ISO 2811-2	0.99 g/cm ³
Flash point	DIN 51 755	+10 °C
Pot life at +20 °C (100 g, 1.5% pbw. hardening powder)		12 – 14 min.
Application temperature		-10 °C to +30 °C

Hardener dosages

Temperature	Hardening powder % pbw. *	Pot life (material temperature) approx. min.	Hardening time (surface temperature) approx. min.
-10 °C	4.5	35 – 40	60 – 80
+0 °C	3.0	32 – 36	50 – 60
+10 °C	2.0	18 – 22	45 – 55
+20 °C	1.5	12 – 14	35 – 45
+30 °C	1.0	10 – 12	30 – 40

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

👁 For further information, please refer to the separate product information sheet “SILIKAL® Hardening Powder”.

Equipment cleaning

The equipment can be cleaned immediately after use with SILIKAL® MMA cleaner, ethyl acetate or acetone.

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Silikal product information

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Safety advice

SILIKAL® RU 380 Resin is highly flammable as delivered. Please refer to the current safety data sheet for information on how to handle the material safely.

CE-labelling

DIN EN 13 813 “Screed material and floor screeds - Screed material - Properties and requirements” (Jan. 2003) specifies requirements for screed material that is used for floor constructions in interiors.

Plastic coatings and sealers are also covered by this standard. Products that conform to the above standard are to be identified with the CE mark.

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.

CE	
SILIKAL GmbH · Ostring 23 · 63533 Mainhausen · Germany	
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RU 380 - 001	
DIN EN 13813:2003-01	
Synthetic resin screed/coating for use in buildings. EN 13813 SR-AR1-B1.5-IR4 (structures according to 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⁾