

SILIKAL® RM 610 HW resin

Reactive methacrylic resin for 1.5–3-mm cold-plastic road and safety markings



Expect more from your floor.

SILIKAL® RM 610 HW resin is a solvent-free, rapid-curing 2-component methacrylic resin with good elasticity. It is used as a binder for manufacturing 2-component cold-plastic road markings in 1.5 – 3 mm thickness in combination with various fillers and scattering agents. The rapid curing time of approx. 20 – 40 minutes and the good resistance to water, salt, grease and mineral oil ensures that the roads can quickly be reopened to traffic. Application takes place in the temperature range between 0 °C and +35 °C (surface temperature). Approvals for finished formulations are already available on the customer side..

Application

The cold plastics manufactured using SILIKAL® RM 610 HW resin are usually applied in layers of 1.5 – 3 mm and primarily on asphalt road surfaces, either by hand or using automatically driven cold-plastic marking machines. The thickness depends on the mechanical load and on the evenness of the surface. It is important to ensure a sufficient minimum thickness, especially in the case of heavy traffic load.

When used on concrete road surfaces, the concrete has to be pretreated (e.g. milling, shot blasting, high-pressure water blasting) and an MMA-compatible concrete primer applied. The ready to use cold-plastic compound is dispersed without lumps, with 50 % BPO hardening powder and directly onto the surface using a trowel, rake or draw box.

For the pigmentation, we recommend using titanium dioxide rutile for white paints. Small amounts of anatase can be added to increase the chalking effect, although this will also increase the thixotropy of the cold-plastic compound.

Inorganic pigments such as iron oxides are suitable for coloured paints. Carbon black is not suitable as black pigment. Furthermore, many conventional paint additives, such as silicone oils, some dispersing agents or anti-settling agents based on amines are not suitable or only partly suitable as they can affect the curing process.

The standard cold-plastic compound is also suitable for safety or structured markings, whereby only the viscosity has to be adapted to the road marking machine.

Grip scattering

On most public roads, skid resistant and reflective road markings are required. For this purpose, different grains of white quartz and/or silanate glass beads can be mixed in and scattered, depending on the required degree of skid resistance. Scattering agents such as granite, cristobalite, corundum, glass beads or similar can be used after testing them for suitability. Silanate glass beads stick well to the binding agent and are better integrated in the cold plastic mixture.

Special remarks

Formulated road marking or coating compounds based on our guide formulations must be modified and matched according to the local or national requirements. Silikal does not assume any responsibility for ready to use compounds, which are out of our influence. We only guarantee the product specification of our resins.

Further information is given in our “Technical Documentation” and “Material Safety Data Sheets”.

Cold-plastic compound, white, trowelled on or 100:2 machine application

Guideline recipe and batch quantities (examples)

Item	Component	Guideline recipe (% by weight)	Comments
1	SILIKAL® RM 610 HW resin	22.3 %	Resin
2	Titanium dioxide rutile	7.5 %	Pigment
3	Millicarb OG	15.0 %	Powder filler
4	Silica sand 0.1–0.3 mm	10.0 %	Fine sand
5	Cristobalite M 72	15.0 %	Grip
6	Fine corundum 1 mm	5.0 %	Grip
7	Glass beads, 3D silanate	25.0 %	Reflection
8	Wacker HDK N20	0.2 %	Thixotropic agent
9	Total:	100%	Average consumption: approx. 1.7 kg/m² per mm thickness
10	SILIKAL® hardening powder	0.3–2 %, in relation to item 9	See “Hardener dosages” table for quantities

Characteristics of RM 610 HW as delivered

Property	Measuring method	Approx. value
Viscosity at +20 °C (ISO 4 mm cup)	DIN EN ISO 2431	55–65 sec.
Density D ₄ ²⁰	EN ISO 2811-2	0.98 g/cm ³
Flash point	DIN 51 755	+10 °C
Pot life at +20 °C (100 g, 2 % pbw. hardening powder)		12–15 min.
Application temperature (substrate)		0 °C to +35 °C
Packing		180 kg steel drums or 900 kg IBC container
Storage time		At least 6 months in original packing, below +25 °C

Hardener dosages (calculated on ready to use cold-plastic compound)

Temperature	Hardening powder % pbw.	Pot life (temperature of material) approx. min.	Hardening time (temperature of substrate) approx. min.
0 °C	2.0	14–18	50
+5 °C	2.0	12–15	40
+10 °C	1.5	12–15	35
+15 °C	1.5	10–12	30
+20 °C	1.0	10–12	30
+25 °C	0.5	10–12	25
+30 °C	0.4	9–11	25
+35 °C	0.3	8–10	20



Other applicable documents

SILIKAL® Hardening Powder
 General advice on application
 The substrate
 Information on safety and protection
 Storage and transport

Data sheet

SILIKAL® Hardening Powder
 AVH
 DUG
 SUS
 LUT