

Sikafloor[®]-91

Low viscosity, Solvent Free Epoxy Resin

Construction

Description	Sikafloor-91 is a 3-component solvent free epoxy resin based mortar for patching and screeding industrial floors subject to heavy traffic.
Uses	Sikafloor-91 provides anti-slip chemical, abrasion and impact resistant epoxy resin floors of 5-40 mm thickness. Sikafloor-91 has high mechanical strength and provides an ideal floor where heavy loading and wear are encountered, eg. loading docks, workshops, heavy machine shops, warehouses, etc.
Advantages	<ul style="list-style-type: none"> • Easy handling • Solvent free • High bond strength to substrate • High abrasion resistance • High mechanical strength • Can be power floated • Anti-slip finish • Permeable to water vapour
Storage & Shelf Life	Minimum shelf life approximately 3 years. Store under controlled conditions in original containers at minimum 5°C, maximum 35°C temperature range.
Instructions for Use	
Surface Preparation	<p>Surface must be sound, level, clean and free from oils, grease or any contaminants. All loose materials and surface laitance must be removed. For larger areas shot blasting, scabbling or the use of a rotating disc sander is recommended. On small areas, needle gunning or bush hammering is effective. Acid etching is also acceptable. The compressive strength of the substrate should be at least 25 MPa. The tensile strength of the substrate should be at least 1.5 MPa. Vacuum cleaning the surface prior to application is a must.</p> <p>Surfaces may be dry or damp; if damp there should be no visible moisture or standing water.</p>
Priming	<p>Mineral based substrates must be thoroughly primed with Sikafloor-94. Ensure complete wetting out of the substrate with the Sikafloor-94 primer.</p> <p>Where porous substrates are found allow the primer, Sikafloor-94, to be strongly absorbed without leaving a continuous glossy film, then add 2% by weight of Thickener T to parts A and B. Stir prior to application. ie: 0.6kg Thickener T to 30kg Sikafloor-94 (A+B).</p> <p>Sikafloor-91 must be applied while the primer is still tacky. If more than 4 hours elapse prior to the application of Sikafloor-91, reprime the substrate with Sikafloor-94.</p> <p>Avoid walking on the primed substrate.</p>
Mixing	<p>A forced action pan mixer is recommended due to the large volumes generally used and the heavy nature of the material, however smaller volumes can be mixed in a 20-30 litre bucket with an appropriate electric drill and paddle.</p> <p>Empty the aggregate (Sikadur-506) into the mixer and mix for a few minutes. Thoroughly mix Component A (resin), add the pigment pack if applicable and continue mixing until a uniform colour is achieved. Add Component B (hardener) to Component A and mix until fully blended.</p> <p>Pour the mixed resin and hardener without delay on to the aggregate (Sikadur-506) in the mixer and mix until a uniform, crumbling consistency is obtained.</p>

Application	Place the Sikafloor-91 mixture on to the tacky, primed substrate. Rake to a uniform thickness with a garden rake. Screed to the required level with steel, aluminium or wooden screed bars and tamp until consolidated. Trowel to a sealed resin rich surface with a steel trowel. Keep the steel trowel clean by regularly wiping with a cloth wetted with Sika Colma Cleaner.			
Cleaning	Clean all tools and equipment immediately after use with Sika Colma Cleaner. Hardened material can only be removed by mechanical means.			
Technical and Physical Data				
Form	Part A:	(Resin) low viscosity liquid		
	Part B:	(Hardener) low viscosity liquid		
	Part C:	(Sikadur 506) quartz sand		
	Mixed:	Wet sand consistency		
Density	1.10 kg/litre approx. Parts A + B mixed 2.1 kg/litre approx. Parts A + C mixed			
Colour	Pearl Grey (N11) Koala Grey (N45) Silver Grey (N24) Oatmeal (Y54) Banksia (G53) Shamrock (G23) Oxide Red Unpigmented (natural sand) (other colours subject to minimum order quantity and price premium)			
Mechanical Strength (at 20°C) (1:10 mix)	Compressive Strength: 90 MPa approx. (@ 14 days) Flexural Strength: 35 MPa approx. (@ 14 days) Bond to Concrete: 2-3 MPa (@ 14 days, cohesive failure to substrate) Tensile Strength: 15 MPa approx. (@ 14 days)			
Limitation on application	Minimum substrate and air temperature: +10°C Maximum substrate and air temperature: +30°C Application thickness per layer: 3-40 mm			
Rate of reaction (approx. times)		10°C	20°C	30°C
	Pot Life (approx. 5kg mix)	50 mins	40 mins	15 mins
	Curing times			
	Walkable:	36 mins	18 hours	12 hours
	Light mechanical use:	2 days	1 day	1 day
	Full mechanical/chemical use:	8 days	5 days	3 days
Co-efficient of thermal expansion	Approx. 2×10^{-5} per °C			



Mix ratio

Mix ratio of Component A: Component B is 2:1 by mass or volume.

Mix ratio of Components (A+B): Component C can vary between 1:5 and 1:10 by mass depending on the particular application.

A recommended floor mix is as follows:

Component A:	6kg
Component B:	3kg
Pigment Pack (optional):	0.6kg
Component C (Sikadur 506):	5.0kg
Total:	59.6kg

Consumption

Approx. 2.1 kg/m²/mm thickness depending on condition of substrate

Packaging

Component A	20 kg steel pail
Component B	10 kg steel pail
Pigment Pack	0.6kg plastic bucket
Component C (Sikadur 506)	20 kg paper bags
Thickener T	1 kg plastic pail

Chemical Resistance

TEST MEDIUM	TEST TEMP °C	Store time and Evaluation					
		1	1	3	6	9	12
		day	mth	mths	mths	mths	mths
Water	20/40	A	A	A	A	A	A
Brine (Salt Water) 20%	20/40	A	A	A	A	A	A
Cement Water	20/40	A	A	A	A	A	A
Detergents	20/40	A	A	A	A	A	A
Caustic Soda 30%	20	A	A	A	A	A	A
Bleach Solution	20	A	A	B	C	C	-
Fuel Oil Heavy	20	A	A	A	A	A	A
Fuel Oil Medium	20	A	A	A	A	A	A
Kerosene	20	A	A	B	B	B	B
Petrol	20	A	B	B	B	B	B
Iso Octane	20	A	A	A	A	A	A
Ethyl Alcohol	20	B	C	-	-	-	-
Toluene	20	C	-	-	-	-	-
Hydrochloric Acid 10%	20	A	B	B	C	-	-
Sulphuric Acid 10%	20	A	A	B	C	-	-
Acetic Acid 5%	20	B	C	-	-	-	-
Citric Acid 10%	20	A	B	C	-	-	-
Sewage/waste water	20/40	A	A	A	A	A	A
Liquid silage	20/40	A	A	A	A	A	A

Key: A = Suitable for permanent immersion

B = Suitable for temporary resistance

C = Not suitable

Important: Where other chemicals, mixtures of chemicals or elevated temperatures are expected, please consult our Technical Dept.

All specimens were fully immersed for the duration of the test. Experiments were carried out under controlled laboratory conditions and are for guidance only.

NB. In all cases of spillage, chemical to be removed as quickly as possible and the surface washed down with water.

Construction

Important Notes

- Store materials prior to mixing at 15°C to 25°C.
- Carry expansion or other joints through the Sikafloor-91 screed and seal with Sikaflex or Sikadur joint sealant.
- Do not apply Sikafloor-91 to floors subject to hydrostatic pressure.
- Maximum moisture content of substrate should be less than 4% otherwise use Sikafloor EpoCem.
- Cured Sikafloor-91 in service can be cleaned with detergents, however, steam cleaning is not recommended.
- In environments where the Sikafloor-91 is to be exposed to prolonged contact with aggressive chemicals, a seal coat of Sikagard-62 or Sikafloor-261 is recommended.
- A rapid curing version of Sikafloor-91 is available. Contact your local Sika office for information.

Handling Precautions

- Avoid contact with the skin, eyes and avoid breathing it's vapour.
- Wear protective gloves when mixing or using.
- If poisoning occurs, contact a doctor or Poisons Information Centre.
- If swallowed, do NOT induce vomiting . Give a glass of water.
- If skin contact occurs, remove contaminated clothing and wash skin thoroughly.
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.
- A full Material Safety Data Sheet is available from Sika on request.

Important Notification

The information, and, in particular, the recommendations relating to the application and end-use of Sika's products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

