

Sikadur[®]-30

Thixotropic adhesive for bonding reinforcements

Description

Sikadur-30 is a thixotropic adhesive mortar based on a 2-component solvent free epoxy resin. Sikadur-30 is used primarily to bond structural reinforcements to other substrates. It can also be used to bond and fill a wide variety of building and construction materials.

Uses

For structural bonding of:

- Sika CarboDur to concrete, brickwork, stone, timber and blockwork.
- Steel plates to concrete.
- Concrete elements.
- Bridge segments.

For bonding of:

- Starter bars.
- Wall anchors.
- Fixings.

For vertical and overhead filling of:

- Holes
- Dimensional inaccuracies.

Advantages

- Excellent green-strength – non sag in vertical and overhead applications.
- High creep resistance under permanent load.
- Good mechanical strength.
- Good chemical resistance.
- Low shrinkage during curing stage.
- Application at low temperatures.
- Excellent adhesion to most building material even when damp.
- High abrasion resistance.
- High early strength.
- High tensile and flexural strength.
- Supplied in factory proportioned units.

Storage and Shelf Life

Minimum shelf life is approximately two (2) years. Store under controlled conditions in original containers (minimum 5°C, maximum 35°C temperature range).

Instructions for Use

Surface Preparation

All surfaces must be clean, sound and free from dust, ice, oils, grease or other surface contaminants such as form release residues and curing membranes.

Concrete, Mortar, Stone: Mechanically abrade the surface with a needle gun, water blast, grit blast or grind. All surface laitance must be removed. Cement and concrete should be at least 3-4 weeks old (max. moisture content 4%). Minimum adhesive tensile strength of the substrate 1.5MPa.

Metals: Remove any paints, oils, grease, rust and oxide films by grit blasting. Apply Sikadur-30 without delay.

Timber: Sandblast the surface or grind the timber, leaving a rough surface on the substrate.

Epoxy: Abrade and rinse with Sika Colma Cleaner.

Mixing

Sikadur-30 is supplied in factory proportioned units comprising the correct quantities of Part A (Resin) and Part B (Hardener). Thoroughly stir both components separately using a slow running drill/stirrer with a helical paste mixer (max. speed 600 rpm). Decant all Part B into Part A and mix

Construction



Sika[®]

Mixing (continued) thoroughly until a uniform colour is achieved (typically 3 mins.). A streaky colouration is indicative of inadequate or incomplete mixing. Apply immediately. Small units may be hand mixed provided an even colour is achieved.

Application When using Sikadur-30 as a structural reinforcement adhesive, apply well mixed epoxy to the substrate, at maximum 1mm thickness, using a spatula, trowel, or float. Adhesive should then be applied to the Sika CarboDur laminate or steel plate in a roof shape (minimum 1mm thickness at the sides, 2mm in the centre).

Steel plates must be fixed to the concrete substrate using specially prepared supports.

Sika CarboDur laminates are pressed into the substrate with hard rubber rollers by hand. It is important that laminates are evenly pressed onto the substrate until the adhesive is squeezed from both sides of the laminate.

Cleaning Uncured material may be cleaned from application tools, etc. by using Sika Colma Cleaner (flammable solvent). Cured material can only be removed mechanically.

Technical and Physical Data

Appearance	Part A	White paste
	Part B	Black paste
	Part A + B	Light grey when mixed
Mix Ratio	A : B = 3 : 1	(parts by weight & volume)
Density	1.77 kg/L	(A + B)
Pot Life *	40 minutes	(at 35°C)
Open Time*	30 minutes	(at 35°C)
Sag Flow*	3 - 5mm	(at 35°C)
Shrinkage	0.04%	
Glass Transition Point*	62°C	
Static E-Modulus*	12,800 MPa	
Adhesive Strength*	Concrete:	4MPa (Concrete Failure)
	Steel	33MPa (Sandblasted Substrate)
Shear Strength*	15 MPa	(Concrete Failure)
Coefficient of Expansion	9×10^{-5} per °C	(-10°C to 40°C)
Consumption	Laminate Type	Sikadur -30
	S512 / H514	~ 0.31 kg/m
	S612 / S614 / M614	~ 0.38 kg/m
	S812	~ 0.50 kg/m
	S914 / M914	~ 0.56 kg/m
	S1012	~ 0.62 kg/m
	S1212 / S1214 / M1214	~ 0.74 kg/m
Packaging	5 kg tins	Part A 3.75 kg Part B 1.25 kg

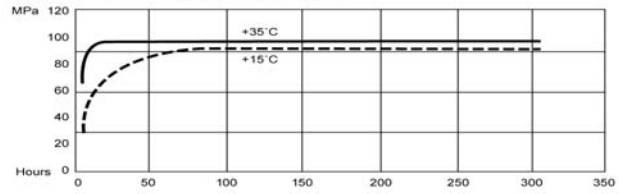
*To F.I.P Federation Internationale de la Precontrainte

Note: The values given may vary according to amount of air extrained during mixing

Construction

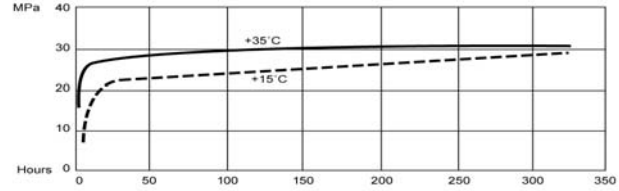
Compressive strength
(DIN 1154.7)

Development of compressive strength



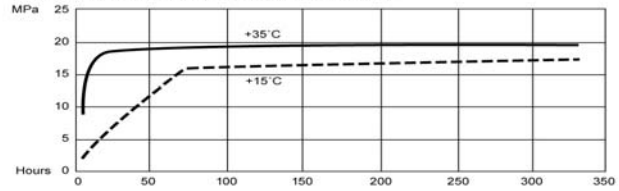
Tensile strength
(DIN 43455)

Development of tensile strength



Tensile slant shear strength (Sika Test)

Development of tensile slant shear strength



Important Notes

- Do not apply Sikadur-30 to surfaces with standing water. Maximum moisture content of the concrete 10%.
- Always mix a full kit to avoid mix ratio errors.
- Only mix as much material as can be applied within the stated potlife.
- It is important to entrain as little air as possible when mixing Sikadur-30. Air entrainment will result in lower compressive strength development.
- Do not dilute the product with solvent as this will affect the cure and service performance.
- Constant service temperature >50°C may affect the performance of this product.
- Sikadur-30 can be heated up to 70°C during curing to speed up the setting time.
- If in doubt, consult our Technical Department.
- Compressive strengths etc. of epoxy resins must be qualified by the testing method e.g. Test Standard or size of specimen under test and the rate of which the test piece is loaded while under test, as these factors will effect the result markedly. Faster loading rates will generally give higher ultimate loads and vice versa. Also, a specimen at lower temperature will show higher strengths and vice versa.

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 water for at least 15 minutes and see a doctor.
- For more detailed information refer to Material Safety Data Sheet.

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.

