

## Sikadur® -42HS

### High Strength Pourable Epoxy Resin Grout

<b>Product Description</b>	Sikadur® -42HS is a 3 component pourable or castable grout based on solvent free epoxy resin and selected aggregates. Sikadur® -42HS cures to form a hardened mortar with excellent adhesion to many substrates. This combined with the product's ease of application makes it ideally suited to site application.		
<b>Uses</b>	Sikadur® -42HS is a high strength, shrinkage free, self levelling epoxy grout suitable for: <ul style="list-style-type: none"> <li>■ Bridge bearing plates.</li> <li>■ Machine bases.</li> <li>■ Mechanical bridge joints.</li> <li>■ Fixing bolts and anchors</li> <li>■ Tire less crane rails, rails in tunnels and on bridges</li> <li>■ Grouting under equipment, including heavy impact and vibratory machinery, reciprocating engines, compressors, pumps, presses, etc.</li> <li>■ And to fill cavities in concrete and levelling layer for pile cap and pile heads</li> <li>■ As a self smoothing mortar for repairing and patching horizontal surfaces</li> </ul>		
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ Good flow characteristics even in thin layers.</li> <li>■ Suitable for both, dry and damp substrates.</li> <li>■ Shrinkage-free hardening.</li> <li>■ Curing is not affected by high humidity.</li> <li>■ High mechanical strengths.</li> <li>■ Tough vibration-resistant material.</li> <li>■ Insensitive to moisture during application, cure or whilst in service</li> <li>■ Applicable at low temperatures down to 5°C</li> <li>■ High early strength</li> <li>■ Easily applied</li> <li>■ Unaffected by wide range of chemicals and oil etc.</li> <li>■ Excellent adhesion to a wide variety of dry and damp substrates such as</li> <li>■ concrete, stone, fibrous cement, synthetic resins, wood and most metals.</li> </ul>		
<b>Product Data</b>	Grey (Mix)		
<b>Colour</b>	Comp. (A): yellowish, Comp. (B): brownish, Comp. (C): grey.		
<b>Packaging</b>	15 kg & 30 kg. net pre-proportioned kit Comp.(A) 2.52 kg. & Comp. (B) 0.48 kg. & Comp. (C) 12 kg.		
<b>Storage</b>	Store at temperatures between + 5°C and +30°C, in dry conditions, away from heat, moisture and direct sunlight.		
<b>Shelf Life</b>	12 months from date of production if stored properly in original unopened packing.		
<b>Technical Data</b>			
<b>Density (20°C)</b>	Comp. (A):	1.1 kg/l	
	Comp. (B):	1.0 kg/l	
	Comp. (C):	1.7 kg/l (bulk density)	
	Comp. (A+B+C):	<b>2.0 kg/l (mixed mortar)</b>	
<b>Coefficient of thermal Expansion</b>	24.5 x 10 <sup>-6</sup> (Temperature range -20°C to + 60°C).		
<b>Mechanical Strengths</b> (7days @ 20°C) Full Curing 14 days	■ Compressive strength	~100 N/mm <sup>2</sup> ( 1 Day ) ~110 N/mm <sup>2</sup> ( 7 Days ) ~120 N/mm <sup>2</sup> ( 14 Days )	(ASTM C-579)
	■ Flexural strength	~40 N/mm <sup>2</sup> ( 1 Days )	(ASTM C-580)
	■ Tensile strength	~14 N/mm <sup>2</sup> ( 7 Days )	(ASTM C-307)
	■ Bond strength t concrete	~4 N/mm <sup>2</sup> (Concrete Failure)	(ASTM C-882)
	■ Bond strength to Steel	~20 N/mm <sup>2</sup>	(EN 1542)



<b>Modulus of elasticity (static)</b>	13,000 MPa approx.
<b>Layer Thickness</b>	Minimum grout depth: 12 mm Maximum grout depth: 50 - 60 mm
<b>Application Mixing Ratio</b>	Comp. A: B: C = 2.52 : 0.48 : 12 parts by weight.
<b>Surface preparation</b>	All surfaces must be sound clean, free from oil, grease, laitance, old coatings, frost, standing water and all loosely adhering particles. For good bond sand, waterblast, grind or scabble substrates. All anchor pockets or sleeves must be void of water. Sandblast metal base plates to a commercial white finish (SP-10) for maximum adhesion. Apply grout immediately to prevent re-oxidizing. <b>Forming</b> - The consistency of the epoxy grout system requires the use of forms to contain the material around the base plates. In order to prevent leakage or seepage, all forms must be sealed. Apply polyethylene film or wax to all forms to prevent adhesion of the grout. Prepare form work to maintain more than 100 mm (4 in) liquid head to facilitate placement. A grout box equipped with an inclined trough attached to the form will enhance the grout's flowability and minimize air encapsulation.
<b>Priming</b>	Primer is not required
<b>Mixing</b>	Sikadur <sup>®</sup> -42HS is supplied in factory proportioned units comprising the correct quantities of Part A (Resin), Part B (Hardener) and Part C (Aggregate). Thoroughly stir Parts A and B separately using a slow running drill stirrer with a spiral mixer (max. Speed 250 rpm). Decant all of Part B into Part A and mix thoroughly together until a uniform mix is achieved (typically 3 mins). Continue to mix whilst adding Part C slowly. Ensure the attainment of an even color and an even distribution of aggregate throughout the mix. Do not exceed 250 rpm. Allow to stand for 2-3 minutes to release any entrained air.
<b>Application</b>	Mixed Sikadur <sup>®</sup> -42HS should be poured into the void or formwork from one side to avoid the entrapment of air. Continuous grout flow is essential and there must be sufficient grout available before pouring. Machine Base Plates & Crane Rails: An adequate head must be maintained to ensure continuous flow. Continue pouring until the grout rises above the level of the plate. At no time during application should the grout head be less than 75 mm above the level of the plate. This, as well as adequate vent holes, is essential to ensure no air is trapped. Anchor Bolts and Dowels: For bolts placed into pre-formed holes, fill the hole with Sikadur <sup>®</sup> -42HS and place into the grout.
<b>Cleaning</b>	Clean all tools and equipment immediately after use with Sika Colma Cleaner <sup>®</sup> .
<b>Material Temperature</b>	Sikadur <sup>®</sup> -42HS must be applied at temperatures between +5°C and +30°C Condition the material by also storing at this temperature for 48 hours before use
<b>Pot Life (15 Kg mix.)</b>	30 min at 25°C
<b>Important</b>	<ul style="list-style-type: none"> <li>■ Maximum thickness per layer: 5 - 6 cm.</li> <li>■ Do not apply Sikadur<sup>®</sup> -42HS to surfaces with standing water.</li> <li>■ Do not part mix containers.</li> <li>■ Only mix as much as can be applied within the stated pot life.</li> <li>■ Do not dilute the product with solvent as this will affect both the cure and in-service performance.</li> <li>■ Constant in service temperatures &gt;70°C may affect the performance of the product.</li> <li>■ Do not apply in large areas unless a damp proof membrane is in place.</li> <li>■ If applying in layers subsequent layers must be applied within 24 hours of the first layer being applied and after the previous layer has cooled to ambient temperature.</li> <li>■ Minimum age of new concrete, 3 to 6 weeks.</li> <li>■ The temperature at which the Sikadur<sup>®</sup> -42HS is stored during the 24 hours before it is mixed will govern its pot life when mixed.</li> <li>■ Sikadur<sup>®</sup> -42HS will rise in temperature when mixing. The extent of this temperature rise will depend upon the volume to surface ratio and the ambient and substrate temperature.</li> <li>■ Compressive strengths etc. Of epoxy resins must be qualified by the testing method eg. Test Standard or size of specimen under test and the rate at which the test piece is loaded while under test, as these factors will affect 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.</li> </ul>



## Safety Instructions

<b>Ecology</b>	Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.
<b>Transport</b>	Comp. A/C: Non-hazardous. Comp. B: 8/66 c).
<b>Safety precautions</b>	<ul style="list-style-type: none"><li>■ Avoid contact with the skin, eyes and avoid breathing its vapor.</li><li>■ Wear protective gloves when mixing or using.</li><li>■ If poisoning occurs, contact a doctor or Poisons Information Center.</li><li>■ If swallowed, do NOT induce vomiting. Give a glass of water.</li><li>■ If skin contact occurs, remove contaminated clothing and skin thoroughly.</li><li>■ If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.</li></ul>
<b>Toxicity</b>	Comp. A/B: Class. 4, under the relevant Swiss health and safety codes. Comp. C: Non-toxic under the relevant Swiss health and safety codes.
<b>Legal notes</b>	<ul style="list-style-type: none"><li>■ The information, and in particular, the recommendations relating to the application and end-use of Sika 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 accordance with Sika's recommendations. 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 user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.</li></ul>



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