BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-42 HS

HIGH STRENGTH POURABLE EPOXY GROUT

DESCRIPTION

Sikadur®-42 HS is a 3-part pourable grout based on a combination of epoxy resins and specially graded aggregates. After mixing, it forms a flowable mortar, suitable for grouting and filling.

USES

Sikadur®-42 HS may only be used by experienced professionals.

- As a self-levelling mortar on concrete, stone, mortar, plasterwork, steel, aluminium, iron, asbestos sheet, wood, polyester, epoxy, etc.
- In rigid connections as in connecting irons, iron ties, mounting supports, tie-rods, etc.
- Grouting of guide rails, rail posts, support plates, machine foundations, bridge supports, sleeper-less rail fixations, track bases for cranes and heavy equipments

CHARACTERISTICS / ADVANTAGES

- Precision grouting/casting. Holding down bolts and machines may be grouted to tolerance before or after positioning.
- Excellent initial strength. Substantial loading may be applied after only six hours and high strength reached after 24 hours at 20 °C. No primer is required.
- Easy to use. The ease and simplicity of Sikadur®-42 HS reduces waiting time and labour.
- Excellent mechanical strength
- Hardens even at high humidity
- Excellent resistance against abrasion impact and vibration
- Components of different colour – therefore good control of homogeneity during mixing
- Can be applied on dry and damp surfaces (no standing water)
- Good flow characteristics even in thin layers

PRODUCT INFORMATION

Composition	Epoxy		
Packaging	Part A	3.33 kg	
	Part B	1.67 kg	
	Part C	20 kg	
	Part A + B + C	25 kg set	
Colour	Part A	Transparent	
	Part B	Transparent	
	Part C	Grey	
	Parts A + B + C (mixed)	Grey	
Shelf Life	12 months from the date of production		
Storage Conditions	Store properly in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Keep away from direct sunlight.		
Density	~2.0 kg/liter (A+B+C) at 25°C		
Viscosity	At +25 °C :		
	Part A	4 400 ± 100 cps	(Brookfield Viscometer)
	Part B	14-18 cps	
	Parts A + B + C (mixed)	Self-levelling mortar	

TECHNICAL INFORMATION

Compressive Strength	**1 day**	**7 days**	(ASTM C 579 - Method B)
	90 N/mm²	100 N/mm²	
Modulus of Elasticity in Compression	**1 day**	**7 days**	(BS 6319: Part 6 - Secant Modulus in compression)
	20 GPa	23 GPa	
Tensile Strength in Flexure	**1 day**	**7 days**	(BS 6319: Part 3)
	20 N/mm²	21 N/mm²	
Tensile Strength	**1 day**	**7 days**	(BS 6319: Part 7)
	15 N/mm²	17 N/mm²	
Tensile Adhesion Strength	Concrete:		
	1 day	**7 days**	(BS EN 1542:1999)
	≥3 N/mm² (Concrete failure)	≥3 N/mm² (Concrete failure)	

APPLICATION INFORMATION

Mixing Ratio	A: B: C = 2: 1: 12 (parts by weight)	
Consumption	1m³ (1000 litres) = approximately 80 sets (not inclusive of wastage)	
Yield	12.5 L of grout per 25 kg set	
Layer Thickness	Minimum	25 mm (per layer)
	Maximum	40 mm (per layer)
Ambient Air Temperature	Minimum +20°C / Maximum +40°C	
Substrate Temperature	Minimum +20°C / Maximum +40°C	
Pot Life	40 minutes (25 kg, +20 °C)	

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Substrate and contact area of base plate must be clean, sound and free from all loose and poorly adhered parts. All oil, dirt, debris, paint and loosely adhered parts must be removed by means of an abrasive and/or mechanical process.

SUBSTRATE PREPARATION

Concrete Surface: New concrete must be at least 3 weeks old and have a compressive strength of 25 MPa. The surface must be prepared mechanically using a scabbler, bush-hammer, shotblast or other suitable equipment to remove cement laitence and achieve an open textured surface. Removed all residue with a vacuum cleaner and repair defective areas, if any, with Sikadur®-41 CF Normal. Allow to cure.
Base Plates: Sandblasts the bottom of the baseplates and wipe clean with an approved metal-cleaning solvent.
Form Preparation: Forms must be strong and liquid tight to prevent leakages. Seal all gaps and brace the forms. Apply the surface of the forms with paste wax or use other bond breaking materials to prevent adhesion of the epoxy grout. The forms should also be high enough to permit Sikadur®-42 HS to be brought up to the side of the base plates.

MIXING

Mix all of Part B (hardener) with all of Part A (resin) for at least 2 minutes with a slow speed electric drill (maximum 500 rpm) until a smooth consistency and streak-free colour is achieved.
Then add all of Part C (aggregates) and continue mixing until a homogeneous mortar is obtained. Use immediately.
For large volume pours, a pan mixer may be used to mix in the Part C.

APPLICATION METHOD / TOOLS

Grouting Under In-Place Equipment
Pour Sikadur®-42 HS into blockouts through a funnel or directly, if space permits, using a headbox. The low viscosity of Sikadur®-42 HS allows it to flow steadily under the In-Place Equipment or base plates during its pot-life. Chaining or rodding may be necessary under difficult conditions.
Grouting New Pads
Set levelling shims or adjust screws to the required level. Pour Sikadur®-42 HS in single or multiple lifts from 25 to 40 mm thick. The grouting process should be carried-out rapidly and continuously. Maintain a 50 mm minimum liquid head at all times to ensure the gap underneath the base plates are completely filled. The final level of the grout should be higher than the base plates to ensure that a full bearing contact is realised. Strip the forms after Sikadur®-42 HS has cured (hardened).

CLEANING OF TOOLS

Clean all tools and application equipment with a solvent, Thinner C, immediately after use. Hardened and/or cured material can only be mechanically removed.

IMPORTANT CONSIDERATIONS

- Maximum thickness per layer is 40 mm
- Do not thin Sikadur®-42 HS
- If thickness of pour exceeds 40 mm adequate precautions against thermal shock must be taken. These may include protecting from water and rain for the first 24 hours, maintaining formwork for at least 24 hours, and providing a reinforcement cage to ensure even distribution of the heat generated.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

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.

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