

PRODUCT DATA SHEET

Sikadur[®]-43 HE (h)

3-PART THIXOTROPIC EPOXY PATCH REPAIR / FILLING MORTAR

DESCRIPTION

Sikadur[®]-43 HE (h) is a thixotropic, three part patch repair and filling and bonding mortar, based on a combination of epoxy resins and special fillers, designed for use at temperatures between +5°C and +40°C.

USES

As a repair and bonding / bedding mortar for:

- Concrete elements
- Hard natural stone
- Ceramics, fiber cement
- Mortar, Bricks, Masonry
- Steel, Iron, Aluminum
- Wood
- Polyester, Epoxy
- As a repair and patching mortar:
- Filling of cavities and voids
- Vertical and overhead use
- As an abrasion and impact resistant filling / repair or wearing course.
- Joint filling and crack repair:
- Joint and crack arris / edge repairs

CHARACTERISTICS / ADVANTAGES

Sikadur[®]-43 HE (h) has the following advantages:

- Easy to mix and apply
- Suitable for dry and damp concrete surfaces
- Very good adhesion to most construction materials
- High strength
- Thixotropic: non-sag in vertical and overhead applications
- Cure under damp conditions - cured product is highly impermeable to water
- Different coloured components (for mixing control)
- No primer needed
- High initial and ultimate mechanical strength
- Good abrasion resistance
- Good chemical resistance
- Suitable for Industrial equipment and machinery subject to static or dynamic forces

APPROVALS / STANDARDS

Testing according to ASTM, C881, Type III, Grade 3, Class E

PRODUCT INFORMATION

Chemical Base	Chemical Base : Epoxy Resin
Packaging	25.2 kg (A+B+C) Pre-batched unit
Colour	Part A: clear Part B: reddish yellow Part C: grey Part A+B+C mixed: grey
Shelf Life	12 months from date of production
Storage Conditions	Stored properly in original unopened, sealed and undamaged packaging, in dry conditions at temperatures between +5°C and +40°C. Protect from direct sunshine.

Density	Mixed Density : 2.2 ± 0.1 kg/l (Part A+B+C mixed) (at +27°C) (evacuated)		
Compressive Strength			(According to ASTM C-579)
	Curing Time	Curing Temperature (+ 30°C)	
	1 day	~85 N/mm ²	
	3 days	~98 N/mm ²	
	7 days	~104 N/mm ²	
	14 days	~108 N/mm ²	
			(According to DIN EN 196)
	1 day	~84 N/mm ²	
	3 days	~96 Na/mm ²	
	7 days	~102 N/mm ²	
14 days	~107 N/mm ²		
Tensile Strength in Flexure			(According to DIN EN 196)
	Curing time	Curing temperature(+30°C)	
	1 day	~20 N/mm ²	
	3 days	~23 N/mm ²	
	7 days	~25 N/mm ²	
14 days	~25 N/mm ²		
Tensile Strength			(According to ISO 527-2)
	Curing Time	Curing temperature(+30°C)	
	7 days	~12 N/MM ²	
14 days	~12 N/MM ²		
Shrinkage	Change of Volume : Shrinkage: Hardens without shrinkage.		
Heat Deflection Temperature	Thermal Stability : Heat Deflection Temperature (HDT): (Ac- cording to ASTM D-648) HDT = +54°C (7 days / +30°C)		
Electrical Resistivity	Transversal Resistivity in air at 25° ohm-cm		
		Greater Than	Results
	Normal	10 x 10 ¹⁰	3.7 x 10 ¹³
	Immersion in water for 24 Hrs	10 x 10 ⁴	9.6 x 10 ¹⁰
Consumption	The consumption of Sikadur®-43 HE (h) is ~ 2.2 kg/m ² per mm of thickness.		
Layer Thickness	50 mm max. When using multiple units, one after the other. Do not mix the following unit until the previous one has been used in order to avoid a reduction in handling time.		
Product Temperature	Sikadur®-43 HE (h) must be applied at temperatures between +5°C and +40°C.		
Ambient Air Temperature	+5°C min. / +40°C max.		
Substrate Temperature	+5°C min. / +40°C max.		
Pot Life	415ml	(According to ASTM D2471-99)	
	+ 30°C	~35 minutes	
The potlife begins when the resin and hardener are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quanti- ty mixed, the shorter the potlife. To obtain longer workability at high tem- peratures, the mixed adhesive may be divided into portions. Another meth- od is to chill parts A+B and C before mixing them (not below +5°C).			

SUBSTRATE QUALITY

Verify the substrate strength (concrete, masonry, nat-

ural stone).

The substrate surface (all types) must be clean and
free from contaminants such as dirt, oil, grease, exist-

ing surface treatments and coatings etc.
Steel substrates must be de-rusted similar to Sa 2.5.
The substrate must be sound and all loose particles must be removed.

SUBSTRATE PREPARATION

Concrete, mortar, stone, bricks:
Substrates must be sound, clean and free from laitance, grease, oils, old surface treatments or coatings and all loose or friable particles must be removed to achieve a laitance and contaminant free, open textured surface.

Steel:

Must be cleaned and prepared thoroughly to an acceptable quality i.e. by blast cleaning and vacuum. Avoid dew point conditions.

Other surfaces (polyester, epoxy, glass, ceramic):
On these substrates pre-apply Sikadur®-31 and then, "wet on wet" apply Sikadur®-43 HE (h)

MIXING

Part (A+B) : Part C = 1 : 4.8 (by volume)

APPLICATION METHOD / TOOLS

When using a thin layer adhesive, apply the mixed adhesive to the prepared surface with a spatula, trowel, notched trowel, (or with hands protected by gloves). When applying as a repair mortar uses some form-work.

When using for bonding metal profiles on to vertical surfaces ,support and press uniformly using props for at least 12 hours, depending on the thickness applied (not more than 5 mm) and the room temperature. Once hardened check the adhesion by tapping with a hammer.

CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Colma Cleaner immediately after use. Hardened / cured material can only be mechanically removed.

FURTHER DOCUMENTS

Value Base : 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.

BASIS OF PRODUCT DATA

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LOCAL RESTRICTIONS

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

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 Material Safety Data Sheet 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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