BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-61

2-part flexible epoxy and PU adhesive

DESCRIPTION

Sikadur®-61 is a 2-part, flexible, elastic, hybrid adhesive based on epoxy, PU, and special fillers. It has very good mechanical properties and bonds well to various construction materials such as concrete, masonry, and steel. It is suitable for use within a temperature range of +10 °C to +35 °C.

USES

Sikadur®-61 is used as an adhesive for:
- Strengthening masonry structures
- Bonding concrete joints
- Bonding concrete, steel, wooden and masonry substrates
- Sealing non-structural static cracks

Sikadur®-61 is used for interior and exterior applications.

CHARACTERISTICS / ADVANTAGES

- Elastic with very good mechanical strength
- Easy to mix and apply
- Very good adhesion to concrete, steel and masonry
- Good adhesion to many other construction materials
- Thixotropic: non-sag in vertical and overhead applications
- Hardens without shrinkage
- Differently coloured components for mixing control
- No primer required

ENVIRONMENTAL INFORMATION

- Contributes towards satisfying Materials and Resources (MR) Credit: Building product disclosure and optimization — Environmental Product Declarations under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

PRODUCT INFORMATION

Chemical Base	Epoxy and PU resin with selected fillers	
Packaging	Parts A+B	4.5 kg pre-batched unit
	Refer to the current price list for available packaging variations.	
Colour	Part A	Light grey
	Part B	Dark grey
	Part A+B mixed	Concrete grey
Shelf Life	24 months from date of production	
Storage Conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling	

and storage.

Density	Part A, at +23 °C	(1.40 ± 0.1) kg/l
	Part B, at +23 °C	(1.75 ± 0.1) kg/l
	Mixed resin, at +23 °C	(1.50 ± 0.1) kg/l
Viscosity	135 Pa·s at 23 °C	

TECHNICAL INFORMATION

Shore A Hardness	90			(ASTM D2240)
Tensile Strength	Cured 1 day at +23 °C, 200 mm/min	2.45 MPa		(EN ISO 527-2)
	Cured 2 days at +23 °C, 200 mm/min	4.50 MPa		
	Cured 7 days at +23 °C, 200 mm/min	6.50 MPa		
Modulus of Elasticity in Tension	Cured 1 day at +23 °C	3.95 MPa		(EN ISO 527-2)
	Cured 2 days at +23 °C	15.0 MPa		
	Cured 7 days at +23 °C	42.0 MPa		
Elongation at Break	Cured 1 day at +23 °C	(270 ± 25) %		(EN ISO 527-2)
	Cured 2 days at +23 °C	(130 ± 10) %		
	Cured 7 days at +23 °C	(95 ± 5) %		

Tensile Adhesion Strength	**Curing Time**	**Substrate**	**Curing Temperature**	**Adhesion strength**	(EN 12188; EN 1542)
	7 days	Concrete dry	+23 °C	> 6.5 MPa (100 % concrete failure)	
	7 days	Concrete mat damp	+23 °C	> 5.5 MPa	

Tear Strength	Cured 1 day at +23 °C	11.0 N/mm	(ISO 34-1)
	Cured 2 days at +23 °C	14.5 N/mm	
	Cured 7 days at +23 °C	19.7 N/mm	
Reaction to Fire	D-s2,d0; C_{fl}-s1		(EN 13501-1)

Service Temperature	Maximum	+45 °C	
	Minimum	-20 °C	
Shear Adhesion	Lap shear strength on CFRP (10 mm overlap)	5.4 MPa	(DIN EN 1465)
	Lap shear strength on steel (10 mm overlap)	8.5 MPa	
Glass Transition Temperature	+50 °C		(EN 12614)

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B	2 : 1 by weight
Consumption	(1.5 ± 0.1) kg/m² per mm of thickness. Consumption depends on the roughness and absorbency of the substrate. Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.	
Layer Thickness	Maximum	40 mm
	Minimum	5 mm
Sag Flow	Non-sag up to 30 mm layer thickness	
Product Temperature	Maximum	+35 °C
	Minimum	+10 °C
Ambient Air Temperature	Maximum	+35 °C
	Minimum	+10 °C
Substrate Temperature	Maximum	+35 °C
	Minimum	+10 °C

Pot Life (ISO 9514)

Temperature	Pot Life
+10 °C	~120 min
+20 °C	~60 min
+30 °C	~30 min

Open Time (ISO 9514)

Temperature	Pot Life
+23 °C	> 110 min
+30 °C	~110 min

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.

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 (MSDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

CONCRETE, MASONRY, MORTAR AND STONE
Concrete and mortar must be at least 3 to 6 weeks old.
Substrate surfaces must be sound, clean, dry or matt damp. Free from standing water, ice, dirt, oil, grease, coatings, laitance, efflorescence, old surface treatments, all loose particles and any other surface contaminants that could affect adhesion of the adhesive.
STEEL
Surfaces must be clean, dry, free from oil, grease, coatings, rust, scale, all loose particles and any other surface contaminants that could affect adhesion of the adhesive.
WOOD

Substrate surfaces must be sound, clean, dry and free from dirt, oil, grease, coatings, all loose particles and any other surface contaminants that could affect adhesion of the adhesive.

SUBSTRATE PREPARATION

CONCRETE, MASONRY, MORTAR AND STONE
Substrates must be prepared mechanically using suitable abrasive blast cleaning, needle gunning, light scabbling, bush hammering, grinding or other suitable equipment to achieve an open textured gripping surface profile.
STEEL
Surfaces must be prepared mechanically using suitable abrasive blast cleaning, grinding, rotating wire brush or other suitable equipment to achieve a bright metal finish with a surface profile to satisfy the necessary tensile adhesion strength requirement. Avoid dew point conditions before and during application.
WOOD
Surfaces must be prepared by planing, sanding or other suitable equipment.
ALL SUBSTRATES
All dust and loose material must be completely removed from all substrate surfaces before application of the product by vacuum and dust removal equipment.

MIXING

IMPORTANT
Poor workability and unfavourable handling time due to wrong mixing
1. When using multiple units during application, do not mix the following unit until the previous unit has been used.

PRE-BATCHED UNITS
1. IMPORTANT Mix full units only. Prior to mixing all parts, mix part A (resin) briefly using a mixing spindle attached to a slow-speed electric mixer (max. 300 rpm).
2. Add part A to part B (hardener) and mix parts A+B continuously for at least 3 minutes until a uniformly coloured, smooth consistency mix has been achieved.
3. IMPORTANT Do not overmix. To ensure thorough mixing, pour materials into a clean container and mix again for approximately 1 minute. Mixing time for A+B = 4 minutes.

APPLICATION

IMPORTANT
Damage due to excessive long-term load
Sikadur® resins are formulated to have low creep under long-term load. However, due to the creep behaviour of all polymer materials under load, the long-term structural design load must account for creep.
1. Ensure that the long-term structural design load is lower than ¼ to ⅕ of the short-term failure load.
2. Consult a structural engineer for calculating the admissible load for the specific application.

1. Apply the mixed adhesive to the prepared surfaces with a spatula, trowel or notched trowel.
2. For optimum adhesion, apply the adhesive to both surfaces that require bonding.
3. For heavy components positioned vertically or overhead, provide temporary support until the Product has fully hardened or cured. Note Hardening and curing depend on ambient temperatures.

CLEANING OF TOOLS

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

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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal

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