

Sikadur® -31

Thixotropic Epoxy Resin Adhesive

Product Description Sikadur® -31 is a solvent-free, thixotropic, two component, adhesive and repair mortar, based on a combination of epoxy resins and specially selected high strength fillers.

Complies with ASTM C 881-78 type I, Grade 3 Class B+C.

Uses Sikadur® -31 is available in three different grades of reactivity: rapid, normal, long pot life. They can be used as follows:

- Adhesive levelling compound for concrete, stone, ceramics, mortar, renderings, steel, iron, aluminium, wood, woodchip boards, polyester, epoxy and glass.
- Concrete repairs.
- Blow hole filling.
- As structural adhesive for precast concrete segments, columns, curb-stones etc.
- Crack and surface sealing.
- Fixation of dowels and starter bars

For Segmental Bridge Construction a special range of adhesives is available:

- Sikadur® -31 SBA, type S 02-08.

Advantages Sikadur® -31 is an extremely versatile product that offers many advantages to the user:

- Easy to apply.
- Suitable for both, dry and damp surfaces.
- Non-sag product, even at high temperatures.
- Hardens without shrinkage.
- Excellent mechanical strengths.
- High early strength according to grade used.
- Components of different colours (Mixing control).
- High abrasion and impact resistance.
- Solvent free.

Product Data

Colour Grey (Comp. (A): white, Comp. (B): black).

Packaging 5, 10 & 30 kg units (A+B).

Storage Store in shade, under normal weather temperature and in dry conditions.

Shelf Life 24 months from date of production if stored properly in original unopened packing.

Technical Data

Density (20°C) All types:
Comp. (A): 1.65 kg/l.
Comp. (B): 1.65 kg/l.

Coefficient of thermal expansion 50×10^{-6} per C (temp. range: -20°C to +40°C).

Modulus of elasticity $4'300 \text{ N/mm}^2$ (Static)

Mechanical Strengths	Normal/Rapid Type	L.P. Type
	after 10 days at +10-20°C	after 10 days at +20-30°C
■ Compressive strength	60 - 70 N/mm ²	50 - 60 N/mm ²
After 24 hrs. at + 20°C:	~40 - 45 N/mm ²	-
After 24 hrs. at + 30°C:	~35 - 40 N/mm ²	-
After 24 hrs. at + 50°C:	-	~40 - 45 N/mm ²
■ Flexural strength	30 - 40 N/mm ²	20 - 25 N/mm ²
■ Tensile strength	15 - 20 N/mm ²	15 - 20 N/mm ²
■ Bond strength to concrete	3.5 N/mm ²	3-3.5 N/mm ² (concrete failure)
■ Bond strength to Steel	~15 N/mm ²	



Application

Mix Ratio Type Normal/Rapid: Comp. (A) : Comp. (B) = 2 : 1 by weight and volume.
Type L.P. : Comp. (A) : Comp. (B) = 2 : 1 by weight and volume.

Surface preparation All surfaces must be clean, free from frost, standing water and all loosely adhering particles. Cement laitance must be removed. Concrete must be at least 3 - 6 weeks old, depending on climate, wire-brush, sand-or water-blasted or grind substrates.

Priming Priming is not required.

Mixing Mix components (A+B) together for at least 2 minutes with a mixing paddle attached to a slow speed electric drill (max. 600 R.P.M.) until the material becomes smooth in consistency and even grey colour of the mixture is obtained. Material in industrial packing must be stirred well before proportioning and mixing. Avoid aeration while mixing.

Application When using a thin film adhesive, apply the mixed adhesive to the surfaces with a trowel, spatula or by glove-protected hand.
When applying as a repair mortar, take into account any form work that may be required. On vertical surfaces it is non-sag up to 10 mm thickness. On damp surfaces, ensure that the material is well rubbed in.
Max. layer thickness: 30 mm.

Cleaning Clean all tools and equipment immediately after use with Colma-Cleaner.

Pot Life	°C	Normal Type	Rapid Type	L.P. Type
	40	-	-	25 min.
	30	20 min.	-	50 min.
	20	40 min.	20 min.	90 min.
	10	90 min.	40 min.	-
	5	-	60 min.	-

Important Optimal working temperatures for each grade are:
■ Normal Type : 10°C - 30°C.
■ Rapid Type : 5°C - 15°C.
■ L.P. Type : 20°C - 40°C.
 When working at a higher temperature than recommended, the pot life will be shortened. Similarly when working at lower temperatures, the material will become more difficult to apply and takes longer to harden. When applying to damp concrete, work well into substrates.
 When the working temperature will be above 45°C, please consult our Technical Service.

Safety Instructions

Ecology In liquid state components (A+B) contaminate water. Do not dispose of into water or soil but according to local regulations.

Transport Comp. A: Non-hazardous.
Comp. B: All types: 8/65 C.

Safety precautions Product may cause skin irritations. Wear gloves and goggles.
If the material is accidentally splashed into the eyes, flush immediately with plenty of warm water and seek medical attention without delay.

Toxicity Class 4, under the relevant Swiss health and safety codes. Observe warnings on packing.

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 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 to our current terms of sale and delivery. 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.
 For further technical information, please consult our technical service department.



Sika Egypt for Construction Chemicals
 El Abour City
 1st industrial zone (A)
 Section # 10 Block 13035,
 Egypt

Tel : +202- 6100714/15/16/17/18
 Fax : +202- 6100759
 Mob : +2012- 3908822/55
 www.sika.com.eg

