



# SikaDur<sup>®</sup> 31

## Thixotropic Epoxy Adhesive

### Technical Data Sheet

#### DESCRIPTION

SikaDur 31 is a two component solvent free, cold cure, thixotropic epoxy adhesive suitable for damp and dry substrates. Available in two grades - **Normal** and **Rapid**.

#### USES

- \* Bonds all types of construction materials: concrete, brick, stoneware, polyester, epoxy, glass, steel, iron and timber.
- \* Bonding bridge.
- \* Levelling.
- \* Blowhole/pore hole filling
- \* Crack and surface sealer.
- \* Bonding new to old concrete.
- \* Crack injection 10 - 15 mm.

#### ADVANTAGES

- \* Colour coded components to ensure correct mixing.
- \* Excellent adhesion even in damp conditions.
- \* Thixotropic consistency allows application in vertical and overhead situations.
- \* Excellent water resistance.
- \* **Rapid** grade for low temperature working.
- \* Resistant to chemicals, solvents, oils.
- \* Solvent free.
- \* Suitable for contact with potable water (**Rapid** grade).
- \* Good resistance to creep.

#### Technical Data (typical)

**Colour:** Grey (mixed)  
Base - white  
Hardener - black

**Density:** 1.55 kg/litre

**Application temperatures:** +0°C min - +20°C max (**Rapid**)  
+5°C min - +30°C max (**Normal**)  
(substrate and ambient)

**Layer thickness per application:** 1.0 mm minimum  
10 mm maximum

#### Compressive strength gain guide (N/mm<sup>2</sup>)

Grade	Normal			Rapid		
	1	5	10	1	5	10
Time (days)						
0°C	-	-	-	5	20	55
5°C	10	40	55	15	35	60
10°C	20	50	60	20	40	65
20°C	55	65	65	60	65	75
30°C	60	70	75	-	-	-

**Flexural strength:** 35 N/mm<sup>2</sup> @ 20°C

**Tensile strength:** 18 N/mm<sup>2</sup> @ 20°C

**Modulus of Elasticity:** 8.0 KN/mm<sup>2</sup> @ 20°C  
(static)

**Coefficient of Expansion:** 50 x 10<sup>-6</sup> per °C

**Bond strength:** Concrete: typically 2 - 3 N/mm<sup>2</sup> (concrete failure)  
Steel: typically 14 N/mm<sup>2</sup> (epoxy failure)

**Shrinkage:** Negligible

#### Pot life:

Grade	Normal	Rapid
Time		
0°C	-	1¼ hrs
5°C	3½ hrs	1 hr
10°C	1½ hrs	30 mins
20°C	40 mins	10 mins
30°C	20 mins	-

Approved for potable water contact.  
Details available on request.

All above values are approximate.

## SURFACE PREPARATION

### Concrete/Brickwork/Mortar Substrates:

Surfaces must be sound, clean, free from frost, oils, grease, standing water and all loosely adhering particles and other surface contaminants. Cement laitance must be removed

Mechanically prepare surfaces by suitable approved techniques such as needle gunning, scabbling, bush hammering, water/grit blasting etc  
Concrete must be at least 3-6 weeks old.

### Steel Substrate:

Prepare surfaces by removing old coatings, rust products, grease, oil etc by suitable mechanical equipment to a bright metal finish. Apply **SikaDur 31** within 4 hours or protect reinforcement with **Sika® Armatec 110 EpoCem®**.

## MIXING

Stir component A prior to mixing (resin). The whole of component A (resin) should be mixed with the whole of component B (hardener) for a minimum of 2 minutes using a slow speed electric stirrer (300-600 rpm) and suitable spiral or paddle mixer until a uniform mix and colour is achieved.

## APPLICATION

Apply directly to the prepared substrate by brush, trowel, spatular to the required layer thickness. Allow each layer to achieve initial set and for heat to dissipate from hardening process before application of further layers.

Smooth off final layer with a clean steel trowel. Avoid feather edges and where necessary form a recess of at least 2.0 mm around repair area.

## IMPORTANT CONSIDERATIONS

- \* At higher temperatures pot life will be shortened.
- \* At lower temperatures the material will become more difficult to apply and take longer to harden.
- \* Wear suitable protective clothing, gloves and eye protection.
- \* Do not add solvent to the mix.
- \* Always ensure good ventilation when using in a confined space.
- \* **Thinner C** is flammable. NO NAKED FLAMES
- \* Do not mix additional fillers.
- \* When bonding @ 0°C ensure ice is not present on substrate and temperature will increase above this value within 24 hours.

## CLEANING

All tools should be cleaned with **Thinner C** immediately after use. Hardened material must be removed mechanically.

## PACKAGING

Refer to latest price list.

## CONSUMPTION

1.55 kg/m<sup>2</sup> @ 1.0 mm thickness  
7.75 kg/m<sup>2</sup> @ 5.0 mm thickness

Excluding allowances for loss wastage surface profile and porosity.

## STORAGE AND SHELF LIFE

Minimum 12 months in sealed containers stored in dry warehouse conditions (+5°C - +30°C).

### Handling Precautions

Sika products are generally harmless provided that certain precautions normally taken when handling chemicals are observed. The materials must not, for instance, be allowed to come in contact with foodstuffs or food utensils and measures should also be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The use of protective clothing, goggles, barrier creams and rubber gloves is required. The skin should be thoroughly cleaned at the end of each working period either by washing with soap and warm water or by using a resin-removing cream - the use of powerful solvents is to be avoided. Disposable paper towels - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. In case of accidental eye or mouth contact, flush with water - consult a doctor immediately. Health and Safety information on Sika Products is available and we strongly advise that this is read prior to their use. Sika products are for professional use and should be stored in sealed containers away from the reach of children.

### Important Note

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 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.

Please consult our Technical Sales Department for further information

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