

# Sikadur® -42 ZA

## High strength fluid epoxy resin grout

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### Product Description

Sikadur® -42 ZA is a solvent-free, three component grout, based on a combination of epoxy resins and special fillers. The product has a fluid consistency and is self levelling.

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### Uses

Sikadur® -42 ZA can be used for:

- Grouting under crane rails
- Grouting under bridge bearing plates and machine bases
- Grouting of steel reinforcement, holding down bolts, etc. into existing concrete or masonry
- Filling of voids and cavities in concrete

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### Characteristics / Advantages

Sikadur® -42 ZA has the following advantages:

- Easy to mix and apply
- Suitable for dry and damp concrete surfaces
- Very good adhesion to most construction materials
- High early strength
- Solvent free
- Hardens without shrinkage
- No primer needed
- High initial and ultimate mechanical strength
- Good abrasion resistance
- Good chemical resistance
- Good flow characteristics

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### Tests

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### Approval / Standards

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## Product Data

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**Form** Liquid

**Appearance /Colours** Part A: Opaque  
Part B: Amber  
Part C: Sand  
Parts A+B+C mixed: Grey

**Packaging** 8.7 litre (3.0 Litre component (A + B) and 15.0kg component C) kit.

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## Storage

**Storage Conditions/  
Shelf-Life** 12 months from date of production if stored properly in original unopened, sealed and undamaged packaging, in dry conditions at temperatures between +5°C and +25°C. Protect from direct sunshine.

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## Technical Data

**Chemical Base** Epoxy resin.

**Density** 2.06 kg/l (Part A+B+C mixed) (at +23°C)

**Layer Thickness** Minimum 3 mm and a maximum of 40 mm.

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.

**Change of Volume** Shrinkage:  
Hardens without shrinkage.

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## Mechanical / Physical Properties

### Compressive Strength

Curing time	8 hrs	24 hrs	7 days	14 days
Compressive Strength at 25°C	10.0 N/mm <sup>2</sup>	50.0 N/mm <sup>2</sup>	65.0 N/mm <sup>2</sup>	70.0 N/mm <sup>2</sup>

### Flexural Strength

Flexural Strength at 25°C	7 days	28.0 N/mm <sup>2</sup>
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### Tensile Strength

Tensile Strength at 25°C	7 days	17.0 N/mm <sup>2</sup>
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**Bond Strength** Sandblasted steel – 20Mpa approx.

Sandblasted concrete – 3.5Mpa approx. (concrete failure)

**Strength Development** Confirm the strength development by producing cubes on site and testing them for compressive and flexural strength.

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## System Information

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### Application Details

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**Consumption / Dosage** The consumption of Sikadur® -42 ZA is ~ 1 litre/m<sup>2</sup> per mm of thickness.

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**Substrate Quality** Mortar and concrete must be older than 28 days (depends on minimal requirement of strengths).  
Verify the substrate strength (concrete, masonry, natural stone).  
The substrate surface (all types) must be clean, dry and free from contaminants such as dirt, oil, grease, existing 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.

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**Substrate Preparation** Concrete, mortar, stone, bricks:  
Substrates must be sound, dry, clean and free from laitance, ice, standing water, 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.

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### Application Conditions/ Limitations

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**Substrate Temperature** ±10°C min. / ±30°C max.

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**Ambient Temperature** ±10°C min. / ±30°C max.

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**Material Temperature** Sikadur® -42 ZA must be applied at a temperatures between ±10°C and ±30°C.

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**Substrate Humidity** When applied to mat moisture concrete, brush the adhesive well into substrate.

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**Dew Point** Beware of condensation!  
Ambient temperature during application must be at least 3°C above dew point.

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### Application Instructions

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#### Mixing

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**Mixing Time**



Pre-batched units:  
Mix parts A+B together for at least 3 minutes with a mixing spindle attached to a slow speed electric drill (max. 600 rpm) until the material becomes a smooth consistency and uniform in colour. Add part C and continue until mixture is homogeneous. Avoid aeration while mixing. Pour the whole mix into a clean container and stir again for approx. 1 minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within its potlife.

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**Application Method / Tools Underplate grouting**

When grouting under bearing pads, rails or bases, ensure that there is sufficient pressure to maintain movement of the grout. Make allowance for the air to escape.

For large volumes, apply in more than one layer and ensure that previous layers have hardened and cooled.

**Anchor bolt grouting**

The correct quantity of Sikadur® -42ZA required to completely fill the annular gap between the bolt and the sides of the hole should be determined before installation is attempted.

Place the pre-determined quantity of Sikadur® -42ZA directly into the bolt hole. Push the anchor bolt into the hole and press it gently to the bottom, displacing the Sikadur® -42 ZA and filling the annulus around the bolt. A slight agitation of the bolt will assist the Sikadur® -42 ZA to fill the annulus evenly. Centre or locate the bolt in the desired position, using shims if necessary, and then leave undisturbed until the Sikadur® -42 ZA has set.

If the Sikadur® -42 ZA does not fill the annular gap evenly during bolt insertion, withdraw the bolt and insert additional Sikadur® -42 ZA and re-insert the bolt. Do not attempt to add additional Sikadur® -42 ZA with the bolt in place.

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

**Potlife** Potlife (3.0 litre) is approximately 30 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 quantity mixed, the shorter the potlife. To obtain longer workability at high temperatures, the mixed grout may be divided into portions. Another method is to chill parts A+B and C before mixing them (not below +5°C).

**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.

**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.

**Health and Safety Information**

**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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