

# Sikadur®-42 MP (IN)

## 3-part multipurpose epoxy grouting system

### Product Description

Sikadur®-42 MP (IN) is a three component, multipurpose, solvent-free, moisture tolerant epoxy grouting system. For use at temperature between +25°C and +40°C.

#### Uses

High-Strength grouting and fixing of:

- Starter bars
- Anchors
- Fasteners
- Tie rods
- Crash barrier posts

Under-grouting and bedding of :

- Base plates
- Machine bases, Seat base-plates for light and heavy machinery including heavy impact and vibratory machinery, reciprocating engines compressors, pumps, presses etc
- Bridge bearings
- Mechanical Joints (i.e road/bridge/deck types etc)

Sleeper-less, direct rail fixing:

- Crane tracks
- Light rail and permanent way in tunnels
- Light rail and permanent way over bridges

### Characteristics / Advantages

Sikadur®-42 MP (IN) has the following advantages:

- High Early Strength
- Ready-to –mix pre batched units
- Moisture tolerant
- Non-shrink
- Corrosion and chemically resistant
- High Compressive Strength
- High Vibration resistance
- Low coefficient of thermal expansion

### Product Data

#### Appearance/ Colour

##### Colours

Part A: hazy  
Part B: reddish yellow  
Part C: grey  
Part A+B+C mixed: grey

##### Packaging

21.6 kg ( A+B+C) : Pre-batched unit  
Part A: 3.00 kg plastic container  
Part B: 0.60 kg Metal container  
Part C: 18.0 kg bag



**Storage** 12 months from date of production if stored properly in original unopened, sealed and undamaged packaging, in dry conditions at temperatures between +20°C and +40°C. Protect from direct sunshine.

**Technical Data**

<b>Chemical Base</b>	Epoxy resin.	
<b>Mixed Density</b>	2.2 ± 0.1 kg/l (Part A+B+C mixed) (at +30°C)	
<b>Layer Thickness</b>	Minimum grout depth: 25 mm Maximum grout depth: 125 mm	
<b>Thermal Stability</b>	Heat Deflection Temperature (HDT): HDT = +57°C (7 days / +30°C)	(According to ASTM D-648)
<b>Effective Bearing Area</b>	> 85%	(According to ASTM C 1339)
<b>Exothermic Peak</b>	42°C (at +30°C)	(According to ASTM D 2471)


**Mechanical / Physical Properties**

<b>Compressive Strength</b>	(According to ASTM C 579)	
	Curing time	Curing temperature(+30°C)
	1 day	≥ 70 N/mm <sup>2</sup>
	3 days	≥ 75 N/mm <sup>2</sup>
	7 days	≥ 80 N/mm <sup>2</sup>
	14 days	≥ 85 N/mm <sup>2</sup>
Note: A drop in temperature will see reduction in strength.		
<b>Flexural Strength</b>	(According to ISO EN 196)	
	Curing time	Curing temperature(+30°C)
	7 days	≥ 22 N/mm <sup>2</sup>
<b>Tensile strength</b>	(According to ISO 527-2)	
	Curing time	Curing temperature(+30°C)
	7 days	≥ 12 N/mm <sup>2</sup>
<b>Bond strength</b>	(According to ASTM C 882)	
	Curing time	Curing temperature(+30°C)
	7 days	≥ 7 N/mm <sup>2</sup>

**System Information**

**Application Details**

<b>Consumption / Dosage</b>	The consumption of Sikadur <sup>®</sup> -42 MP (IN) is ~ 2200kg/m <sup>3</sup>
<b>Substrate Quality</b>	Verify the substrate strength (concrete, masonry, natural stone).  The substrate surface (all types) must be clean 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.
<b>Substrate Preparation</b>	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.

<b>Application Conditions / Limitations</b>	
<b>Substrate Temperature</b>	+5°C min. / +35°C max.
<b>Ambient Temperature</b>	+5°C min. / +35°C max.
<b>Material Temperature</b>	Sikadur®-42 MP (IN) must be applied at temperatures between +20°C and +40°C.
<b>Application Instructions</b>	
<b>Mixing</b>	Part A : B : C = 5 : 1 : 30 by weight (Standard)
<b>Mixing Time</b>	<p>Pre-batched units:  Mix components A and B in the component A pail for approx. 30-60 seconds with a paddle type mixer to a low speed drill (300-450 rpm). Avoid aeration while mixing until the material becomes uniformly blended in colour and viscosity. Place the mixed epoxy into an appropriate mixing vessel. Slowly add the contents of component C (to keep air entrapment at a minimum) dependent on flow requirements (observe the correct mixing ratio) and mix until uniform and homogeneous. (approx. 3 min)</p> <p>Mix only that quantity which can be used within its potlife.</p> <p>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.</p>
<b>Application Method / Tools</b>	<p><i>Forming:</i>  The consistency of the Sikadur®-42 MP (IN) epoxy grout system requires the use of permanent or temporary forms to contain the material around base plates, for example. In order to prevent leakage or seepage, all of these formers must be sealed. Apply polyethylene film or wax to all forms to prevent adhesion of the grout. Prepare the formwork to maintain more than 100 mm liquid head to facilitate placement. A grout box equipped with an inclined trough attached to the form will enhance the grout flow and minimize air encapsulation. Pour the mixed grout into the prepared forms from one or two sides only, to eliminate air entrapment. Maintain the liquid head to ensure intimate contact to the base plate. Place sufficient epoxy grout in the forms to rise slightly above the underside (3 mm) of the base plate. The minimum void depth beneath the baseplates shall be 25 mm. Where the void beneath the base plate is greater than 100 mm, place the epoxy grout in successive 100 mm lifts or less, once the preceding lift has cooled.</p> <p>Once hardened check the adhesion by tapping with a hammer.</p> <div style="text-align: center;">  </div> <p><b>Working at high temperatures:</b>  It is recommended when working with Sikadur®-42 MP (IN) at temperatures above 30°C, that the following guidelines should be observed:</p> <ul style="list-style-type: none"> <li>• Prior to use store the unmixed materials in a cool, preferably temperature controlled environment, avoiding exposure to direct sunlight or other heat sources.</li> <li>• Refer to the data sheet of the specific product and closely follow the instructions in the section “storage conditions”.</li> <li>• Keep all equipment cool, arranging shade and protection where necessary. It is especially important to keep cool all surfaces that will come into direct contact with the material.</li> <li>• Try to avoid application during the hottest times of the day.</li> <li>• Provide sufficient material, plant and labour to ensure that the application is a continuous process and that the grout does not stop moving during flow application process.</li> </ul> <p><b>Important Note:</b> When both the materials and/or the substrates are too hot, the potlife will decrease dramatically!</p> <p>Refer to Method statement - SIPL_TM_RF-MS-Grouts-001_1 for details</p>
<b>Cleaning of Tools</b>	Clean all tools and application equipment with Sika® Colma Cleaner immediately after use. Hardened / cured material can only be mechanically removed.

**Pot life**

( 100g mass)

5:1:30	+30°C
	45 - 50 minutes

The pot life 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 pot life. To obtain longer workability at high temperatures, the mixed adhesive may be divided into portions. Another method is to chill parts A+B and C before mixing them (i.e. only when application temperatures are above +20°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.

**Health and Safety Information**

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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