

PRODUCT DATA SHEET

Sikadur® ADH 1414

(formerly MBrace ADH 1414)

Epoxy bonding agent for concrete repairs, bonding concrete to concrete, steel and granolithic toppings

DESCRIPTION

Sikadur® ADH 1414 is a permanent epoxy adhesive for internal or external bonding of renderings, granolithic toppings, and concrete to concrete. It tolerates a degree of moisture before and during curing and is insoluble when cured. The ultimate bond strength is greater than the tensile strength of concrete. Sikadur® ADH 1414 does not shrink and provides an even and stress-free bond.

USES

Sikadur® ADH 1414 may be applied to clean, sound and durable surfaces, i.e. steel, glazed tiles and bricks, ceramic and quarry tiles, terrazzo tiles and floors. Also, to smooth and worn granolithic paving, old and worn concrete, engineering, and semi-engineering bricks.

FEATURES

- High strength
- Non shrink
- Moisture tolerant
- Durable
- Resistant to chemical attack
- Supplied in pre-weighed units

CERTIFICATES AND TEST REPORTS

ASTM C881 Type 2 Grade 2, Class B & C.

PRODUCT INFORMATION

| | | |
|--------------------|---|--------------|
| Packaging | Component A | 2.475 kg |
| | Component B | 0.525 kg |
| | Component A+B | 3 kg |
| Shelf life | Up to 12 months if stored according to manufacturer's instructions in unopened containers. | |
| Storage conditions | Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. | |
| Density | ~1485kg/m ³ (Mixed density at 25 °C) | (ASTM D1475) |

TECHNICAL INFORMATION

| | | |
|---------------------------|-------------------------------------|-------------|
| Compressive strength | ≥50 N/mm ² (7 days) | (ASTM D695) |
| | ≥45 N/mm ² (7 days) | (ASTM D661) |
| Tensile adhesion strength | >20 N/mm ² (slant shear) | (ASTM C882) |
| Water absorption | <0.1% | ASTM D570 |

APPLICATION INFORMATION

| | | | |
|-------------------------|---|---------|--------------|
| Consumption | 2-2.7 m ² /kg dependent on substrate profile. | | |
| Ambient air temperature | +10°C min. / +40°C max. | | |
| Dew point | Beware of condensation and dew point conditions. Substrate temperature during application must be at least 3°C above dew point. | | |
| Substrate temperature | +10 °C min. / +40 °C max. | | |
| Open Time | Temperature | Minutes | (ASTM D2471) |
| | 25 °C | ~150 | |
| | 40 °C | ~75 | |

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LIMITATIONS OF USE

TEMPERATURE

Since low temperatures retard the setting and curing of Sikadur® ADH 1414, avoid working in cold weather if possible. Although Sikadur® ADH 1414 will cure slowly at low temperatures, a temperature of 7°C to 10°C can be considered to be the lowest at which work on vertical rendering may proceed satisfactorily without shuttering.

ECOLOGY, HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. For further information refer to the material safety data sheet.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

All surfaces must be thoroughly cleaned and prepared. All loose particles, laitance, dust, curing compounds, floor hardeners, oil, grease, fat, bitumen and paint must be removed if good bond strength is to be achieved. Gloss surfaces must be abraded. If oil, grease, fat, etc. are present, they should be removed before starting any other form of preparation.

All laitance weak or friable concrete should be removed by chipping, grit blasting, or scabbling until a sound base is obtained.

All laitance should be removed by mechanical scarification, grit blasting, or by acid etching. Visible signs of mould growth, lichen, or algae should be removed and treated with a fungicidal wash.

New concrete should have cured until the shrinkage and moisture movement is low. Surfaces heavily impregnated with mould oil should be degreased and grit blasted or mechanically scarified to remove the contaminated surface. All curing compounds should have disintegrated or be removed, and application carried out only onto a clean, dust free surface.

MIXING

Carefully transfer the entire contents of the smaller container of Sikadur® ADH 1414 Component-B (reactor) to the larger Sikadur® ADH 1414 Component-A (base) tin and thoroughly mix, using a stout palette knife or a slow running drill with a paint mixing paddle until uniformity is achieved. This normally takes about three minutes. Do not attempt to mix only part of the contents. Do not attempt to thin Sikadur® ADH 1414.

APPLICATION

Sikadur® ADH 1414 should be applied evenly across the whole surface with a clean, short haired paint brush or a laying-on trowel. After application, the Sikadur® ADH 1414 must be left to stand before over-coating. The time delay will depend on surface and prevailing conditions but will typically be 60 minutes at 25°C or 45 minutes at 40°C. The applied Sikadur® ADH 1414 should be protected during this time to prevent contamination. This is particularly necessary on horizontal surfaces.

Renderings and screeds

Once the render or screed has been applied over the Sikadur® ADH 1414 recognised methods of working may be adopted.

It is essential that granolithic paving and sand cement renders and screeds are cured. This can be achieved by curing with a fine spray of clean water and polythene sheeting. More effective is to spray the surface with a curing membrane from the Sika®Antisol range. Failure to observe these precautions may cause the render or screed to crack.

Expansion joints formed in the substrate should be carried through the rendering or screed and may be filled with Sikaflex® PRO-3 Purform®, an elastic polyurethane sealant for floor joints and civil engineering applications.

CLEANING OF EQUIPMENT

Use a suitable thinner (Xylene / MEK / Acetone) to clean tools when Sikadur® ADH 1414 is still wet or tacky. Once Sikadur® ADH 1414 has set hard, it can only be removed by chipping or burning.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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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ISO 9001, 14001, 45001 – SGS:
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- Sika International Chemicals LLC
- Sika Gulf B.S.C. (c)
ISO 9001, 14001 – SGS:
- Sika Saudi Arabia Limited
ISO 9001, 14001 – TÜV:
- Sika UAE LLC (Branch)
ISO 9001 – SGS:
- Sika MB LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



Product Data Sheet

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