

PRODUCT DATA SHEET

Sikagard®-340 WCT

2-part coloured waterborne epoxy coating for tunnels

DESCRIPTION

Sikagard®-340 WCT is a 2-part coloured, chemically resistant epoxy coating for internal application to concrete tunnels. It provides a hard wearing, seamless, low maintenance, easily cleanable, gloss finish.

USES

The Product is used as a coating for tunnel walls made of concrete or lined with cementitious mortar.

Please note:

- The Product may only be used by experienced professionals.

FEATURES

- Good resistance to specific chemicals
- Good mechanical resistance
- Very good abrasion resistance
- Permeable to water vapour
- Very low odour
- Easy to apply
- Easy to clean and maintain

PRODUCT INFORMATION

| | | |
|------------------------------|---|----------|
| Composition | Water based epoxy | |
| Packaging | Container Part A | 14.60 kg |
| | Container Part B | 5.40 kg |
| | Container Part A + Part B | 20 kg |
| | Refer to the current price list for available packaging variations. | |
| Appearance and colour | Cured colour | RAL 9010 |
| | Other colours available upon request. | |
| Shelf life | 12 months from date of production | |

SUSTAINABILITY

- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

CERTIFICATES AND TEST REPORTS

- CE marking and declaration of performance based on EN 1504-2:2004 Products and systems for the protection and repair of concrete structures — Surface protection systems for concrete — Coating
- Reaction to fire EN 13501-1, Hoch, No. KB-Hoch-180925
- Reaction to fire EN 13501-1, Hoch, No. KB-Hoch-180957
- Reaction to fire EN 13501-1, Hoch, No. KB-Hoch-180958
- Gloss measurement EN ISO 2813; Wet scrub resistance EN ISO 11998; Cleanability EN ISO 11998, iLF, No. 170988, EN
- Cleaning test – Sikacrete-213 F
- Scratch Resistance BS EN ISO 1518-1, SOCOTEC, No. COA/06201

Storage conditions

The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging.

Refer to the current Safety Data Sheet for information on safe handling and storage.

| | | | |
|----------------|---------------|-------------|-----------------|
| Density | Part A | 1.58 kg/lit | (EN ISO 2811-1) |
| | Part B | 1.07 kg/lit | |
| | Mixed Product | 1.39 kg/lit | |

| | | |
|------------------|-----------------------|------------|
| Viscosity | Mixed resin at +23 °C | 1100 mPa·s |
|------------------|-----------------------|------------|

TECHNICAL INFORMATION

| | | |
|----------------------------------|--|---------------|
| Tensile adhesion strength | >1.5 N/mm ² (failure in the concrete) | (EN ISO 4624) |
|----------------------------------|--|---------------|

| | | |
|----------------------------|------------------------------|---------|
| Service temperature | Permanent | +50 °C |
| | Short-term, maximum 12 hours | +100 °C |
| | Short-term, maximum 7 days | +80 °C |

APPLICATION INFORMATION

| | | |
|---------------------|-----------------------------|---------|
| Mixing ratio | Part A : Part B (by weight) | 73 : 27 |
| | Part A : Part B (by volume) | 65 : 35 |

Consumption**ON CONCRETE**

| Layer | Product | Consumption |
|---------------|--|---|
| Primer | Sikagard®-340 WCT diluted 5 % with water | 1-2 × 0.15 – 0.20 kg/m ² per layer |
| Wearing layer | Sikagard®-340 WCT | 1-2 × 0.15 – 0.25 kg/m ² per layer |

OS 2 (OS-B)

| Layer | Product | Consumption |
|---------------------|---|--------------------------------------|
| Hydrophobic coating | Sikagard®-740 W | 1 × 0.10 kg/m ² |
| Wearing layer | Sikagard®-340 WCT First layer diluted 5 % with water | 2 × 0.20 kg/m ² per layer |

OS 4 (OS-C)

| Layer | Product | Consumption |
|---|---|--------------------------------------|
| Levelling filler (pore closure and levelling) | Sika MonoTop®-723 Finiro | 1 × 4.10 kg/m ² |
| Wearing layer | Sikagard®-340 WCT First layer diluted 5 % with water | 2 × 0.20 kg/m ² per layer |

Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

| | | |
|-----------------------------|---------|--------|
| Material temperature | Maximum | +30 °C |
| | Minimum | +10 °C |

| | | |
|--------------------------------|---------|--------|
| Ambient air temperature | Maximum | +30 °C |
| | Minimum | +10 °C |

| | | |
|------------------------------|---------|------|
| Relative air humidity | Maximum | 75 % |
|------------------------------|---------|------|

Dew point

Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation on the surface of the applied product.

Substrate temperature

| | |
|---------|--------|
| Maximum | +30 °C |
| Minimum | +10 °C |

Substrate moisture content

| Substrate | Test method | Moisture content |
|-------------------------|------------------------------------|------------------|
| Cementitious substrates | Calcium carbide method (CM-method) | ≤6 % |

No rising moisture (ASTM D4263, polyethylene sheet).

Waiting time to overcoating

Before applying Sikagard®-340 WCT on Sikagard®-340 WCT, allow:

| Temperature | Minimum | Maximum |
|-------------|-------------|---------|
| +10 °C | 180 minutes | 7 days |
| +20 °C | 180 minutes | 7 days |
| +30 °C | 150 minutes | 7 days |

Before applying Sikagard®-340 WCT on Sika MonoTop®-723 Finiro, allow:

| Temperature | Minimum | Maximum |
|-------------|----------|---------|
| +10 °C | 24 hours | 3 days |
| +20 °C | 24 hours | 3 days |
| +30 °C | 24 hours | 3 days |

Before applying Sikagard®-340 WCT on Sikagard®-740 W, allow:

| Temperature | Minimum | Maximum |
|-------------|---------|---------|
| +10 °C | 8 hours | 7 days |
| +20 °C | 5 hours | 7 days |
| +30 °C | 4 hours | 7 days |

Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.

Drying time

| Temperature | Tack free | Lightly service-able | Full cure |
|-------------|-----------|----------------------|-----------|
| +10 °C | 24 hours | 5 days | 10 days |
| +20 °C | 6 hours | 3 days | 7 days |
| +30 °C | 3 hours | 2 days | 5 days |

Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.

Damage due to mechanical wear before full cure

Note: Cleaning the Product mechanically before it has fully cured may cause damage to the coating surface.

1. Allow the Product to fully cure before using a mechanical method of cleaning.

SYSTEM INFORMATION

System structure

ON CONCRETE

| Layer | Product |
|---|--|
| Primer | 1 – 2 × Sikagard®-340 WCT diluted 5 % with water |
| Wearing layer | 1 – 2 × Sikagard®-340 WCT |
| OS 2 (OS-B) | |
| Layer | Product |
| Hydrophobic coating | 1 × Sikagard®-740 W |
| Wearing layer | 2 × Sikagard®-340 WCT First layer diluted 5 % with water |
| OS 4 (OS-C) | |
| Layer | Product |
| Levelling filler (pore closure and levelling) | 1 × Sika MonoTop®-723 Finiro |
| Wearing layer | 2 × Sikagard®-340 WCT First layer diluted 5 % with water |

BASIS OF PRODUCT DATA

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.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

SUBSTRATE CONDITION

Cementitious substrates must be structurally sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum tensile strength of 1.5 N/mm².

Substrates must be clean, dry and free of contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

MIXING

MIXING PROCEDURE

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. **IMPORTANT:** Do not mix excessively. Mix Part A + B continuously for ~3 minutes until a uniform mix is achieved.
4. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
5. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure com-

plete mixing.

APPLICATION

IMPORTANT

Protect from moisture

After application, protect the Product from damp, condensation and direct water contact for at least 24 hours.

IMPORTANT

Ventilation in confined spaces

Always ensure good ventilation when applying the Product in a confined space.

IMPORTANT

UV exposure

The Product is not resistant to permanent direct exposure to UV light.

1. Where exposed, cover the Product with a suitable coating to resist UV

APPLICATION PROCEDURE

1. Apply the Product evenly over the surface with a brush or fleece roller
2. Alternatively, apply the product using airless spray equipment
3. Ensure a continuous, pore free coat covers the substrate. If necessary, apply two priming coats

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be removed mechanically.

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.

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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