BUILDING TRUST
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PRODUCT DATA SHEET

# Sikagard® E.W.L. Trowel Grade

Trowel-applied, abrasion, corrosion and chemical resistant urethane coating and lining

## PRODUCT DESCRIPTION

Sikagard® E.W.L. Trowel Grade is a two-component, chemical resistant and elastomeric urethane-based coating. It is chemically thickened to allow trowel applications up to 250 mil on vertical surfaces with minimum sag. The material has been specifically designed for use in water and wastewater applications, including those which require potable water contact certification. Sikagard® E.W.L. Trowel Grade provides a chemical, corrosion, temperature and abrasion resistant lining and is one of the toughest coatings available, specifically formulated to meet the demanding needs of the water/wastewater industries.

## WHERE TO USE

Sikagard® E.W.L. Trowel Grade may only be used by experienced professionals.

- Crack filler for tanks, reservoirs and chemical containment structures.
- For repairs or for forming flashings and seals around pipes and roof penetrations.
- Cold joint filler, cant strip mortar and lining for vertical surfaces.

## CHARACTERISTICS / ADVANTAGES

- Trowel Grade offers exceptional waterproofing performance in a formulation modified to allow vertical or free form trowel application
- Chemically-thickened for application to vertical surfaces, cold joints, cant strips and cracks
- Adheres to and bridges between common construction materials such as concrete and steel
- Can be applied onto Sikaflex®-2C sealants where movement joint requires chemical and heat resistant coatings
- Forms a tough elastomeric coating able to bridge cracks and fill joints
- ANSI/NSF 61 certified for potable water contact up to 82 °C (180 °F)
- Excellent wear and abrasion service
- UV stable
- Can be repaired when damaged or when new penetrations are added
- Can be applied to complex tanks with multiple penetrations, sumps, and irregular shapes
- Environmentally sound, complying with the most demanding VOC content standards

## PRODUCT INFORMATION

**Packaging**

3 L (0.8 US gal) unit:
Component A (resin) 2.68 L (0.71 US gal) can
Component B (activator) 0.32 L (0.09 US gal) bottle

17 L (4.5 US gal) unit:
Component A (resin) 15 L (4 US gal) pail
Component B (activator) 2 L (0.5 US gal) jug

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| | A unit consists of Component A (resin) in an underfilled can or pail and Component B (activator) in a bottle or jug. Quantities have been pre-measured to provide the proper mix ratio. Do not estimate proportions or part mix. |
| **Appearance / Colour** | Glossy black<br>Note: When exposed to direct sunlight the gloss is reduced to matte within 3–6 months. |
| **Shelf Life** | **Component A (resin):** 2 years when stored at -6 to 43 °C (20 to 110 °F);<br>**Component B (activator):** 6 months when stored at 21–35 °C (70–95 °F)<br>Precondition material to at least 15 °C (60 °F) before use. |
| **Storage Conditions** | Store out of direct sunlight, clear of the ground on pallets protected from rainfall. |
| **Density** | Component A (resin): 0.94 kg/L (7.9 lb/US gal)<br>Component B (activator): 1.2 kg/L (10.1 lb/US gal)<br>Mixed and Cured: 0.99 kg/L (8.3 lb/US gal) |
| **Solid content by volume** | 89 % |
| **CSC MasterFormat®** | **07 14 16 \| COLD FLUID-APPLIED WATERPROOFING** |

## TECHNICAL INFORMATION

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| **Shore A Hardness** | 60 | (ASTM D2240) at 25 °C (77 °F) |
| **Abrasion Resistance** | 0.0012 g loss | Taber Abrader, Wheel CS-17/1000 g/1000 cycles (ASTM D4060) |
| **Tensile Strength** | Approx 5.5 MPa (800 psi) | (ASTM D412)<br>100 mil sheet |
| **Elongation at Break** | 300 % | (ASTM D412) |
| | **Recovery from 100 % extension** | |
| | After 5 minutes: 98 % | |
| | After 24 hours: 100 % | |
| **Pull-Off Strength** | 2.4 MPa (350 psi) | (Elcometer on dry concrete) |
| **Tear Strength** | 150 lb-in | (ASTM D624) / Die C |
| **Crack Bridging Ability** | > 3 mm (1/8 in): 10 cycles at -26 °C (-15 °F)<br>> 6 mm (1/4 in): After heat aging | |
| **Chemical Resistance** | Jet fuel resistance - Pass for joints | (FS SS-S-200D) |
| | For other chemical substances please contact Sika Canada for advice | |
| **Permeability to Water Vapour** | 0.03 perms | Method E, 37 °C (100 °F), 100 mil sheet (ASTM E96) |
| **Service Temperature** | -51 to 104 °C (-60 to 220 °F) | |

## APPLICATION INFORMATION

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| **Mixing Ratio** | **Weight** 6.1:1 / **Volume** 7.7:1 |
| **Consumption** | 1.2 m²/L (50 ft²/US gal.) at 30 mil w.f.t. per coat, two (2) coats to 60 mil w.f.t. |

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| | total recommended.<br>Coverage rates do not allow for surface profile, porosity or waste. | |
| **Pot Life** | Approx. 20 minutes dependent upon application method and temperature. | |
| **Curing Time** | Potable Water Service | 2 weeks (60 mil w.f.t., at 15 °C / 60 °F) (disinfection of the surface required - refer to "Curing Treatment") |
| | Other Applications | 24 hours in certain conditions |

## BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.
Properties tested at 23 °C (73 °F) and 50 % R.H. unless stated otherwise.

## LIMITATIONS

- Sikagard® E.W.L. Trowel Grade is best installed by skilled and experienced applicators. Consult Sika Canada Technical Services for advice and recommendations.
- Minimum substrate temperature: 10 °C (50 °F)
- Substrate temperature must be at least 3 °C (5.5 °F) above the measured dew point.
- Do not apply the material when the ambient or substrate temperatures are rising or the coating is in direct sunlight.
- Do not apply in wet weather, when rain is imminent or when the applied coating or the substrate may become wet within 4 hours of application.
- Material temperature should be at least 15 °C (60 °F) at the time of mixing and application. Sikagard® E.W.L. Trowel Grade may be preheated to facilitate application at low temperatures, but working time will be reduced.
- Do not thin or part mix the material.
- Do not mix Sikagard® E.W.L. Trowel Grade by hand; mechanically mix only.
- Avoid contamination of product with water or moisture. Keep all containers tightly closed until ready for use. All equipment, air supplies, and substrates must be absolutely dry.
- Use caution when applying Sikagard® E.W.L. Trowel Grade in confined spaces.
- Spray application of the material will result in reduced working time.
- Observe the curing times and especially the curing time before immersion into and service in potable water.
- Sikagard® E.W.L. Trowel Grade appears as a glossy black film when first applied but upon contact with direct sunlight the gloss will be replaced with a matte appearance within 3–6 months depending upon the degree of exposure.

## ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

**General**
All substrates must be clean and dry with no oil, grease or loose debris. Sikagard® E.W.L. Trowel Grade is recommended for porous and non-porous substrates. Perform adhesion tests to confirm adequacy of surface preparation.

**Concrete**
Concrete surfaces must be clean, sound and dry. Remove any dust, laitence, grease, oil, dirt, curing agents, wax, detritus and contaminants from the concrete by appropriate mechanical means, in order to achieve a profile equivalent to ICRI / CSP 4 - 6, exposing aggregate. The compressive strength of the concrete substrate should be at least 20 MPa (3000 psi) at the time of application of Sikagard® E.W.L. Trowel Grade.

**Steel**
Steel substrates must be dry, clean and sound. Remove all materials which might impede adhesion, including corrosion products, dirt, dust, grease, oils, detritus and contaminants by appropriate mechanical means, such as abrasive blast cleaning, in order to achieve SSPC-SP10 / NACE No. 2 Near White Blast for immersion situations or SSPC-SP6 / NACE No. 3 Commercial Blast for non-immersion service. Minimum profile must be 3 mil. Use Sikagard® E.W.L. Bonding Agent for greater adhesion. (See separate Product Data Sheet.)

**Other Metals**
Metal substrates, other than steel, must be dry, clean and sound. Remove all materials which might impede adhesion, including corrosion products, dirt, dust, grease, oils, detritus and contaminants by solvent clean and then appropriate mechanical means, such as abrasive blast cleaning, in order to achieve SSPC-SP1.

The surface must also be deglossed. Use Sikagard® E.W.L. Bonding Agent for greater adhesion. (See separate Product Data Sheet.)

### Previous Coatings and Linings

Sikagard® E.W.L. Trowel Grade may be applied over some existing coatings and linings and achieve acceptable performance. Sikagard® E.W.L. Bonding Agent is recommended for greater adhesion. (See separate Product Data Sheet.)

Finished system results will vary due to project specific factors, including service conditions and nature of exposure. Therefore Sika Canada cannot accept responsibility for determining the suitability of an existing coating as a substrate for Sika products. The Owner or their Representative shall perform adhesion tests on any existing coating or lining to determine suitability.

### Priming / Surface Conditioning

Porous substrates subject to outgassing or metal surfaces requiring barrier protection after blast-cleaning should be primed with Sika® MT Primer (refer to separate Product Data Sheet). Minimum waiting time after application of Sika® MT Primer and before applying Sikagard® E.W.L. Trowel Grade must be at least 12 hours at 21 °C (70 °F). Maximum waiting time for the same procedure will be at most 48 hours at the same temperature. Should the maximum waiting time expire but less than 30 days have passed, the primer must be examined for contamination, the pH value checked and the primer solvent wiped with Xylene, before reapplication.

**Or:**

Uneven, profiled and blowholed substrates and those where a temporary moisture barrier is required, should be levelled and sealed with Sikagard®-75 EpoCem®CA (refer to separate Product Data Sheet). The minimum waiting time between Sikagard®-75 EpoCem®CA and overcoating with Sikagard® E.W.L. Trowel Grade shall be 24 hours and where a moisture barrier is needed the maximum waiting time to overcoat will be three (3) days. Should a longer intercoat period be required, consult Sika Canada Technical Services for information.

## MIXING

Thoroughly stir Component A (resin) of Sikagard® E.W.L. Trowel Grade in its part-filled container using a slow-speed (200–300 rpm), 12 mm (½ in) drill to eliminate entrapping air. Use a 200 mm (8 in) mud or *Exomixer*® type paddle suited to the volume of the container.

**Important:** Do not draw air into the mix and under no circumstances agitate (shake) or stir Component B (activator) before adding to Component A (resin).

Slowly add Component B (activator) to Component A (resin) while mixing and mix thoroughly for at least three (3) minutes. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge at least once, to ensure complete mixing. When completely mixed Sikagard® E.W.L. Trowel Grade should be uniform in colour and consistency. Mix only the quantity that can be used within its pot life.

## APPLICATION

Apply Sikagard® E.W.L. Trowel Grade directly to the clean, dry and suitably prepared substrate using a trowel or brush. For thicker applications, mixed material should be allowed to stand and build viscosity for several minutes before attempting to apply. Sikagard® E.W.L. Trowel Grade will not self-level.

Sikagard® E.W.L. Trowel Grade may be sprayed with a properly configured plural component spray system. Contact Sika Canada for specific recommendations. Spray equipment must be flushed regularly with mineral spirits during application to prevent material from setting up in the hose and pump.

Sikagard® E.W.L. Trowel Grade may be recoated in one (1) hour, depending upon curing conditions, and must be recoated soon after the coating is touch dry (no longer comes off on polyethylene [typically within 4 hours of mixing]). If the coating has cured for longer than this time, the surface must be heavily abraded using a grinder or other mechanical means, and be free of dust and debris before overcoating. Use Sikagard® E.W.L. Bonding Agent for better adhesion only when the recoat window is missed. For immersion conditions, all coats must be applied within four (4) hours of each other, except at joint lines.

For applications, such as cant strips and expansion joints, where adhesion of subsequent coats is undesirable, allow 12 hours for Sikagard® E.W.L. Trowel Grade to cure prior to recoating or alternatively, use a bond breaker.

## CURING TREATMENT

### Curing
Before placing Sikagard® E.W.L. Trowel Grade into potable water service or similar applications, allow sufficient time for solvents to release from the coating.

The required time for a 60 mil wet film thickness is two (2) weeks at 15 °C (60 °F) but can vary if the thickness is greater or the curing conditions (ambient and substrate temperatures) are less conducive.

For many other applications, Sikagard® E.W.L. Trowel Grade may be placed into service after 24 hours have elapsed since the final coat was applied. Contact Sika Canada for specific recommendations.

### Disinfection
The cured Sikagard® E.W.L. Trowel Grade coating must be washed, rinsed, and disinfected before being put into service in potable water and fish pond service. Consult Sika Canada for advice.

## CLEAN UP

Clean all tools and equipment, of uncured material, after use with mineral spirits. Spray equipment must be flushed through regularly during application to prevent material from curing in the hose and pump. Once hardened, material is more difficult to remove; soaking in solvent will soften the material and may assist in its mechanical removal.

# 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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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