

SilaCote ST 100 Technical Data Sheet

Description:

SilaCote is a premium, liquid applied, permanent elastic, cold applied and cold curing, single component, moisture triggered, silane, aliphatic membrane used for long-lasting waterproofing.

- Simple application (with trained personnel)
- When applied forms seamless membrane without joints
- Resistant to water, frost and is crack bridging
- Provides water vapour permeability and excellent thermal resistance
- Provides excellent adhesion to almost any type of surface
- Resistant to detergents, oils, seawater and domestic chemicals
- Can be easily repaired locally

Recommended Uses:

- Waterproofing of roofs
- Waterproofing of balconies, terraces and verandas
- Waterproofing of wet areas (under-tile) in bathrooms, kitchens, balconies, auxiliary rooms, etc
- Waterproofing of pedestrian traffic decks
- Protection of polyurethane foam insulation
- Waterproofing and protection of concrete construction, bridge-decks, tunnels, stadium stands etc.
- Impact protection of steel-, wooden and even plastic surfaces

Specifications:

Finish: Flat finish
Specific gravity: $1,30 \pm 0,05 \text{ g/cm}^2$
Colour: off-white or mid grey
Solids (vol.): 99 + 1%
VOC: 0 gr/litre

Shelf life: 9 months, unopened
Store indoors at 5°C to 40°C

Consumption and Drying time:

0,65 – 2,6 kg/m² applied in two or three layers.

This coverage is based on application by roller on a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

Skin forming time : 10 minutes @20°C/65% RH
Rain stability time : 15 minutes @20°C/65% RH

Light pedestrian traffic : after 18-24 hours.
Final curing time : 7 days

SilaCote ST 100 Technical Data Sheet

PROPERTY	RESULTS	TEST METHOD
Elongation at break	>280 %	ASTM D 412/DIN 52455
Tensile strength	1,5 N/mm ²	ASTM D 412/DIN 52455
Water vapour permeability	>25 gr/m ² /day	ISO 9932:91
Resistance to water pressure	No Leak (1m water column, 24H)	DIN EN 1928
Adhesion to concrete	< 2.0 MPa (concrete surface failure)	ASTM D 7234
Crack bridging capability	Up to 2 mm crack (reinforced)	EOTA TR-008
Hardness (Shore A)	52 - 58	ASTM D 2240
Hydrolysis (5% KOH, 7 days cycle)	No significant elastomeric change	In house Laboratory
Service temperature	-30°C to +90°C	In house Laboratory
Shock temperature (15 min)	200°C	In house Laboratory

Surface preparation:

Careful surface preparation is essential for optimum finish and durability.

The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25 MPa, cohesive bond strength at least 1,5 MPa. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by grinding.

Possible surface irregularities need to be smoothed. Any loose surface material and grinding dust need to be thoroughly removed.

Repair of cracks and joints:

The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.

- Clean concrete cracks and hairline cracks of dust, residue or other contamination. Prime locally with SilaCote Sealer and allow 2-3 hours to dry. Fill all prepared cracks with a SilaCote ST sealant, then apply a layer of SilaCote ST, 200 mm wide centred over all cracks and while wet, cover with a correct cut stripe of surfacing reinforcing. Work area to soak, then saturate the surfacing reinforcing fabric with enough SilaCote ST, until it is fully covered. Allow 12 hours to cure where possible.
- Clean concrete expansion joints and control joints for dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approximate 2:1.

Apply SilaCote ST joint-sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of SilaCote ST, 200 mm wide centred over and inside the joint. Place the reinforcing strip over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside. Then fully saturate the fabric with enough SilaCote ST. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with a SilaCote ST sealant. Do not cover, allow 12-18 hours to cure.

Priming: Most surfaces do not require PRIMER SYSTEMS due to SilaCote naturally high adhesion values.

SilaCote ST 100 Technical Data Sheet

Only very absorbent surfaces like concrete, cement screed or wood may require priming with SilaCote Sealer but unlikely. Surfaces such as bitumen or asphalt mineral felts may require priming with SilaCote ML Free to stop possible discoloration from substrate bleeding through. Prime non-absorbent surfaces such as metal, ceramic tiles or old coatings with SilaCote Sealer. Allow the primer to dry according to the technical data sheets.

Waterproofing membrane:

Stir well before using. SilaCote ST can be applied with roller or brush for detailing and stripe coating. Larger areas can be spray applied allowing for a considerable saving in manpower. Reinforcement maybe required in some circumstances with SilaCote 60g matting in problem areas such as wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc. for further information please contact your approved applicator.

ATTENTION: For best results apply max over 1 mm thickness (dry film) per layer. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures will retard the curing process, high temperatures will accelerate curing.

Finishing:

For high foot traffic areas or designated foot paths, in order to avoid excessive wear/damage to the membrane and enhance grip during wet days it is recommended to either, sprinkle suitable aggregates onto the curing coating to create an anti-slip surface or to use the recommended SilaCote walk-way pad coating.

Good Practices:

The surface to be coated must be dry, clean, dull and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that could interfere with adhesion.

Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to the coating application.

Areas of oxidation on metals after surface preparation and prior to the coating application, should be prepared to specified standard.

Consult the referenced standards, SSPS-PA1 and your SilaCote representative for additional information or recommendations.

Application Equipment:

SilaCote ST 100 Technical Data Sheet

The following is a guide. Changes in pressure and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Use a new set of spray hoses and keep them reserved for 1-k moisture cure coatings, if the equipment is not well cleaned and if there is a foreign reducer or cleaning thinner in the system the coating can react and become a “chewing gum” type material or simply not cure correctly.

Airless Spray Pump:

Pressure: 150 – 400 bar (2175 – 5800 psi)
Hose: 3/8 - 1/4" ID
Tip: 0.19" – 0.24"
Filter: Remove filter

Reduction: Reducer Silacote Si- Bs - Max 10%
As guided by Trained Applicator Contact Silacote technical

Brush

Material: Natural bristle
Reduction: Reducer Silacote Si- Bs - Max 10%

Squeegee

Material: Rubber or other material
Reduction: Reducer Silacote Si- Bs - Max 10%

Reducer

Spray : Reducer Silacote Si- Bs - Max 10%
Brush and Roll: Reducer Silacote Si- Bs - Max 10%

Clean up Silacote solvent M

Application Conditions:

Temperature

Air and Surface: 5°C (41°F) minimum, 55°C (131°F) maximum.
Material: 7°C (44.6°F) minimum.
Do not apply over surface ice or water.
Relative humidity: 6% Minimum, 98% maximum.

Refer to our Product Application Guide for detailed surface application information.

Ordering Information:

Packaging: 5, 20 Litre Buckets and 200 Litre Drums
Product code: 040101-xx
Weight : 1,30 ± 0,05 Kg/L. (colour depending)

Safety Precautions: Danger!

Intended for professional use only. Obtain and read SilaCote Safety Data Sheet for this before using.

Container could be under pressure, take care opening the lit.

Adequate Ventilation: Do not breathe dust, vapours or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring
Silacote ST 01-06-2021

SilaCote ST 100 Technical Data Sheet

demonstrates vapour/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapour may cause flash fire.

Keep out of reach of children

First aid: If affected by inhalation of vapour or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse.

Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local and/or government environmental authority regulations.

Disclaimer: The information and recommendations set forth in this Technical Data Sheet are based upon tests conducted by or on behalf of the SilaCote company, such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your SilaCote Coatings representative to obtain the most recent Technical Data Information.

Warranty: SilaCote warrants their products to be free of manufacturing defects in accord with applicable SilaCote Coatings quality control procedures. Liability for products proven defective, if any, are limited to replacement of the defective product areas or the refund of the purchase price paid for the defective product areas only as determined by SilaCote Coatings. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SILACOTE, EXPRESSED OR IMPLIED STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.