

Concrete Deck Waterproofing - Membranes

Silcor™ 900S

Rapid-set, spray-applied, liquid waterproofing membrane for decks, terraces, walkways, roofs

Description

Silcor™ 900S is a premium performance two-component spray-applied seamless waterproofing that rapidly cures to form a high-strength, elastomeric, and fully-bonded waterproof protection. Unlike conventional liquid membranes, Silcor 900S is extremely durable with excellent wear and chemical resistance and does not normally require additional protection against mechanical damage.

Principal Applications

New and remedial waterproofing for:

- Podium decks
- Plaza decks
- Balconies and terraces
- Walkways and foot bridges
- High-foot traffic areas
- Concrete roof decks
- Green / Planted roofs
- Water features/ planters
- Service reservoir roofs
- Below-ground foundations
- Secondary containment

System Components

- **Silcor 900S** – premium performance two-component, spray-applied seamless waterproofing membrane
- **Silcor P10 Epoxy Primer** – two-component epoxy primer.
- **Silcor P20 PU Primer** – two-component polyurethane primer.
- **Dry Quartz Silica Sand** – fine dry silica quartz sand for use with primers. Contact Grace for specification.
- **Hydroduct® (optional)** – geocomposite drainage/ irrigation sheet.
- **Hydroduct® Root Barrier (optional)**

Advantages

- **Seamless** – continuous waterproofing integrity.
- **Rapid-set** – quick self-curing system for fast installation and vertical surfaces.
- **Robust** – Wide application temperature range and humidity.
- **Productivity** – spray-applied for maximum coverage per day.
- **Fully bonded** - eliminates water migration to prevent water tracking.
- **Non-flammable** – solvent free.
- **Low Odour** – zero VOC, 100% solids.
- **Elastomeric** - accommodates movements and bridges concrete shrinkage cracks.
- **Superior Performance** – high strength, elongation, and tear resistant properties.
- **Durable** – tough with excellent wear and abrasion resistance.
- **Chemical Resistance** – excellent fuel and chemical resistance.

Design

Silcor 900S waterproof membrane system is suitable for use with concrete and steel surfaces. Roof decks should be designed in accordance with relevant standards.

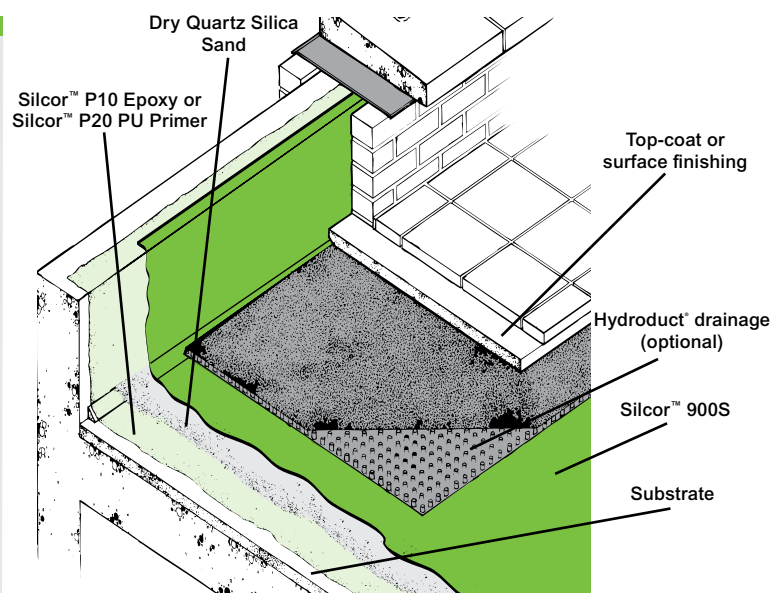
Compatibility/Adhesion

Concrete and steel surfaces must be suitably prepared to accept primers and membranes to ensure adequate adhesion. Mechanical preparation recommended. For further details concerning surface preparation guidelines and primer choice, contact Grace.

Installation

Silcor 900S waterproof membrane system is applied only by experienced, trained contractors. Contact Grace for further details.

- Silcor 900S should only be applied to correctly prepared, primed, and sand blinded surfaces in dry conditions. Surfaces should be clean, dry, and free of contaminants and loose particles. Consult Grace for surface preparation guidance and the requirement for shot blasting on specific substrates.
- Ambient application temperature must be between 0 °C and +50°C. Substrate temperature should exceed the dew point temperature by a minimum of 3°C. Relative humidity should be less than 85%.



Details shown are typical illustrations only and not working drawings. For assistance with working drawings and additional technical advice please contact Grace Technical Services

Physical Properties

	Typical Value	Test Method
Resistance to hydrostatic head over 3.2 mm post formed crack	> 70 m	ASTM D5385
Tensile Strength	18 MPa	ASTM D412
Elongation	350 %	ASTM D412
Tear Strength	> 70 kN/m	ASTM D624
Adhesion to concrete	Concrete failure (note 1)	ASTM D4541
Adhesion to steel	> 4.0 MPa (note 1)	ASTM D4541
Shore Hardness	96A, 48D	ASTM D2240
Abrasion Resistance (Taber Wear index)	< 50	ASTM D4060

Footnotes:

1. Tested on prepared, primed, and sand blinded concrete or steel.

Liquid Properties

	Typical Value	Test Method
Viscosity - Resin	500 mPa.s (note 1)	Brookfield Viscometer
Viscosity - Iso	200 mPa.s (note 1)	Brookfield Viscometer
Solids Content	100 %	ASTM D1644
Specific gravity (Resin, Iso)	1.0 g/cm ³ , 1.1 g/cm ³ (note 1)	
Coverage Rate (2 mm thickness)	2.2 kg/m ²	Internal
Gel Time	3 to 5 secs (note 2)	Internal
Tack-Free Time	7 to 10 secs (note 2)	Internal

Footnotes:

1. Measured at 25°C

2. Temperature Dependent

All declared values shown in this data sheet are based on test results determined under laboratory conditions and with the product sample taken directly from stock in its original packing without any alteration or modification of its component parts.

Supply

	Unit of Sale
Silcor™ 900S (Resin)	200 kg
Silcor™ 900S (Iso)	225 kg
Ancillary Products	
Silcor P10 Epoxy Primer (Part A)	6.89 kg
Silcor P10 Epoxy Primer (Part B)	3.11 kg
Silcor P20 PU Primer (Resin)	7.04 kg
Silcor P20 PU Primer (Iso)	2.96 kg

Limitations

- Silcor 900S should not be left as a permanently exposed wearing surface unless it is protected by a UV protective top-coat or wear coating. Contact Grace for further details.
- Silcor 900S should be stored between 5°C and 25°C prior to spraying.

NBS Specification Clause

Refer to Clause J30/130 and J31/130.

www.graceconstruction.com

Grace Construction Products Limited Ajax Avenue Slough Berkshire SL1 4BH United Kingdom
Tel +44 (0)1753 692929 Fax +44 (0)1753 691623

Hydroduct is a registered trademark of W R Grace & Co.-Conn. Silcor is a trademark of W R Grace & Co.-Conn.

The information given is based on data and knowledge considered by GRACE to be true and accurate and is offered for the user's consideration, investigation and verification only. Since the conditions of use are beyond our control we do not warrant the results to be obtained. None of these statements, recommendations or suggestions shall constitute a warranty, guarantee, representation or statement of similar legal nature. No statement, recommendation or suggestion is intended for any use which would violate or infringe statutory obligations or any rights belonging to a third party. This data sheet should be checked against the latest version available from the local GRACE Representative or the GRACE website. The information contained in the latest data sheet supersedes all previously published editions. Visits to site by GRACE personnel do not constitute supervisory responsibility.

These products may be covered by patents or patents pending. Copyright 2010. Grace Construction Products Ltd SIL900S/UK/SM/001h 09/10

Chemical Resistance

Silcor 900S offers protection to a wide range of chemicals. Contact Grace for specific details and recommended applications.

Warranties

Grace Construction Products and trained contractors can provide warranties for individual projects. Contact Grace for further details.

Health and Safety

For Silcor 900S, Silcor P10 Epoxy Primer, and Silcor P20 PU Primer read the product label and Material Safety Data Sheet (MSDS) before use. Users must comply with all risk and safety phrases. MSDSs can be obtained from Grace Construction Products.

GRACE