

CEMproof® SilverSeal "active"

SilverSeal Swelling Non-woven, Laminated with PE-membrane.

SilverSeal is a Light-weight, Swelling, Water reactive, Self-healing Sealing Membrane.

SilverSeal

CEMproof EasySeal is a "light-weight" waterproofing system for the use of any water-sealing applications. CEMproof SilverSeal is a needle-punched non-woven impregnated with water absorbing and water swelling polymer coated with a silver-shining PE-sheet. SilverSeal is a well-tested double-sealing system!

Field of Application

CEMproof SilverSeal is a waterproofing system, which:

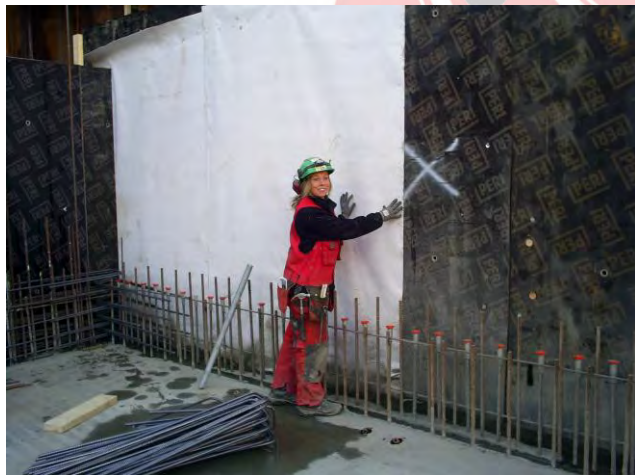
- consists of a needle-punched non-woven, fully impregnated with water absorbing, water reacting and water swelling polymer
- is combined with a high density PE-membrane.

SilverSeal is modified especially for the field of structural waterproofing as well as tunnel sealing.

The self-healing properties of the hydrophilic, water reactive polymers secure the integrity of the system, even if the PE-membrane, which is on the upstream face, is damaged during installation or backfilling.

Penetrating water causes the polymers to swell and thus renders the CEMproof SilverSeal impermeable. The building structure is permanently protected against penetrating water, even small cracks and voids in the concrete are sealed.

CEMproof SilverSeal can also be used in saltwater areas!



Areas of Use

CEMproof SilverSeal is used in all applications, where structures have to be protected against groundwater and seepage.

For the waterproofing of foundations, basements, tunnels, garages and flat roofs CEMproof SilverSeal is an economically and environmentally friendly alternative to synthetic liners, bituminous products and coatings.

Advantages of SilverSeal

- Tough and resistant, quick and easy to install, high compound shear strength
- Can be installed in every season, independently of temperature and weather condition
- No use of complicated welding equipment and specially trained staff, overlappings can be easily secured with CEM 805 adhesive
- Quality control (CE-Certification)
- Self-healing properties of the system based on swelling pressure of the activated swelling polymers
- Seals small cracks in the concrete by the pressure of the swelling polymer
- Flexibility in roll dimensions (2 m x 50 m)
- Can be used in saltwater condition
- Several tests have been made at the University of Braunschweig/Germany
- Easy handling of CEMproof EasySeal because of the extreme light weight
- Enormous water absorbing capacity and therefore similar large swelling and sealing capacity because of embedded high swelling absorbing polymer

Technical Data

Name of Product	CEMproof SilverSeal swelling non-woven
Type	Swelling non-woven, laminated with PE-sheet
Raw material	Polypropylene fibres, white impregnated
Swelling material	water absorbing, swelling polymer
Mass per Unit Area (g/m ²) dry / wet after swelling / re-dried	DIN EN ISO 9864: 2005 450 / 8200 / 435
Thickness at surcharge 2 kN/m ² (mm) dry / wet after swelling / re-dried	EN 964 - 1 2,2 / 9,5 / 4,2
Surcharge 20 kN/m ² / 200 kN/m ² ; (mm) dry	1,5 / 7,0 / 1,9
Maximum tensile force (kN/m) dry / wet after swelling / re-dried	DIN EN 12236: 2006 6,1 / 9,8 / 6,0
associated elongation % dry / wet after swelling / re-dried	DIN EN 29073: CD//MD 75/102/82 // 115/145/110
Static puncture test (kN) dry / wet after swelling / re-dried	EN 12236 1,7 / 1,0 / 1,6
Associated movement of plunger (cm) dry / wet after swelling / re-dried	EN 12236 6,1 / 10,8 / 6,1
Class of Robustness	GRK 3
Testing of swelling pressure (kN/m ²)	> 170
Water permeability	DIN 18130 TX-KP-ST-UO
Initial swelling	< 5 x 10 ⁻⁹ [m/s]
Dry-Wet-Testing	< 3 x 10 ⁻⁹ [m/s]
Frost-thaw-cycle (4 cycles)	< 3,9 x 10 ⁻⁹ [m/s]

Storage

CEMproof SilverSeal has to be stored dry and frost-free. SilverSeal has to be protected during storage against UV. Shelf life is 5 years.

Form of Delivery

EasySeal: Roll dimension: width x length = 2 m x 50 m; diameter Ø 0.50 m/roll, weight 47 kg

SilverSeal: Roll dimension: width x length = 2 m x 50 m; diameter Ø 0.57 m/roll, weight 57 kg;
5 rolls/pallet = 500 m²/pallet

Pictures / Application

SilverSeal is a public-tested double-sealing membrane. The overlappings are tested up to 2.5 bar water pressure (5 cm minimum overlapping bonded together with CEM 805).

The water constancy (alkaline water, saltwater, etc.) has no marginal influence of the water-penetration along and through EasySeal / SilverSeal swelling non-woven. (See actual test report of the Technical University BS / Germany)
EasySeal / SilverSeal swelling non-woven is a unique technology made in Germany! The handling is very easy compared to any other systems available on the market. Overlapping areas are glued with CEM 805 and are absolutely waterproof sealed up to 2.5 bar water pressure. (See several different test reports of different public laboratories)

