

Watertite S2012

Multi layer self adhesive waterproofing system

Bituminous waterproofing membrane system for structure upto 12 meter depth

CHARACTERISTICS

- ▶ Loosely laid system. Remains independent of the structural movements and settlements.
- ▶ Excellent adhesion of the top layer polypropylene fleece with concrete forms a part of the concrete structure.
- ▶ Multilayer waterproofing protection to water ingress under high hydrostatic head pressure.
- ▶ Cold applied, self-adhesive and easy to apply.
- ▶ Very high resistance to puncture and impact.
- ▶ Self-healing capability against minor punctures.
- ▶ Good dimensional stability under tension.
- ▶ High mechanical strengths.
- ▶ High resistance to chlorides, sulphates, alkalis & acids.
- ▶ Good low temperature flexibility



resistance to hydrostatic pressure



adhesion



cold applied

DESCRIPTION

Multilayer self-adhering waterproofing system comprising 2 layers of cross laminated HDPE membrane protected with polypropylene fleeced self-adhering bituminous membrane designed for deep structures, up to 12 meter deep from the ground level and subjected to hydrostatic pressure. Watertite S2012 is specifically designed for ease in application and also as a highly efficient system to prevent the ingress penetration of water into the structure.

FIELDS OF APPLICATION

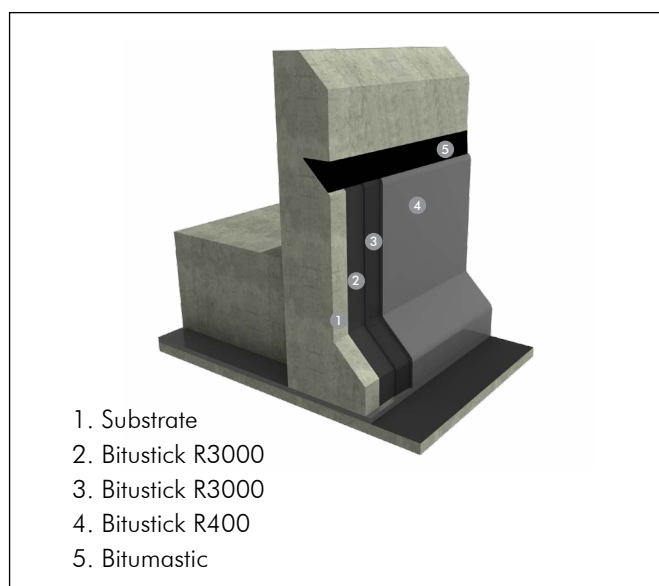
- commercial and residential buildings
- deep structure near to sea
- structures under high hydrostatic pressure

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. application procedures may vary slightly depending upon site conditions, the general recommended guidelines for the application of the waterproofing system is as follows:

Surface Preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. all surface imperfections, protrusions, structurally unsound and



1. Substrate
2. Bitustick R3000
3. Bitustick R3000
4. Bitustick R400
5. Bitumastic

friable concrete must be removed and repaired with a suitable concrete repair mortar. Provide a 45-degree cement sand angle fillet on all internal corners and external corners shall have a 20mm chamfer.

Priming

Priming is required only at the internal & external corners for reinforcing strips only on critical areas when the first layer of waterproofing membrane is to have a fully bond on the substrate. Mix the contents of the pail/drum of Polyprime SB prior to the application to remove any sediments. Apply the primer @ 4-6 m²/lt by a brush, roller or an airless spray at the corners and pile heads. Allow the primer to dry and become tack free (After 2-4 hours depending on the ambient temperature) before the application of the waterproofing membrane.

Installation

Provide a minimum 200 mm wide reinforcing strip of Bitustick R3000 over the cement sand angle fillet in all the corners. 1st Layer Membrane Bitustick R3000 – Start the installation of the first layer membrane of the system by loosely laying it on the blinding concrete. Begin the installation from low point or drains. All overlaps at the membrane seams shall be installed so as to have “up” slope laps over “down” slope laps. Begin membrane application by unrolling the rolls and aligning the side laps. Peel off the release film from the overlaps

(selvedges) and press the membrane, an iron roller shall be used to ensure a proper and strong adhesion of the bitumen compound at the overlaps. Overlaps shall be a minimum of 100mm at sides and ends. 2nd Layer Membrane Bitustick R3000 - Second layer membrane shall be installed on the same direction as that of the first layer but started on a 50% staggered position. This means the side laps of the second layer of membrane shall fall exactly in center between of any two side laps of the first layer membrane, or simply 50% away from the 1st layer's side lap. Care should also be taken that end laps of the second layer should not fall directly over the end laps of the first layer. Peel off the release film from the self-adhesive side of the second layer membrane and start unrolling the membrane and press it to the surface of the first layer simultaneously while unrolling, smoothen the membrane from the center to the edge in order to drive out entrapped air with a smooth press/roller. Furthermore, a smooth iron roller shall be used for rolling on the top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound. Overlaps shall be a minimum of 100mm at sides and ends. Precautions and application procedure is to be followed as per the first layer application.

3rd Layer / Protection Membrane – Third layer membrane shall be installed on the same direction as that of the Second layer but started on a 50% staggered position. The two layers of the waterproofing membrane are now to be protected with a self-adhesive protection membrane Bitustick R400, which not only protects the previous layers but also act as a third layer of waterproofing to the system. The presence of a polypropylene fleece on the Bitustick R400 membrane will ensure complete adhesion with the underside of the freshly placed concrete. Therefore, the waterproofing system is loose laid on the blinding concrete and bonded completely with the structural concrete and thus becomes part of the structure and the waterproofing system adjusts according to any possible structural movement / settlement, also preventing the lateral movements of water. Apply Watertite TS 15 on the end joints and cut joints (wherever selvedge is not available) of Bitustick R400 prior to laying of membrane.

Unroll and align Bitustick R400 membrane on 2nd layer to fit the orientation and roll it back. Now slowly peel off the release film at the back and simultaneously the release film from the top of Bitutape TS and carefully place the membrane without changing its orientation. Selvedge of 50mm width is available only on the sides of the membrane which allows continuous application of the subsequent rolls. the membranes shall be butt-jointed at the laps using Bitutape TS as the joint sealer beneath the butt joints to provide a watertight sealing.

Injection Hose

Unsealed construction joints can decisively lessen the durability and utility-value of concrete structures. Nowadays, injection hose systems are being increasingly used for sealing construction joints in waterproof concrete structure. The Injection hose compliments the traditional waterstop systems. Pre injection will act like a second layer of waterproofing, this injection activity recommends the step before the dewatering. The area of application is usually at the construction joint (other application areas can be applied) where hardened and fresh concrete must be joined in such a manner that the sealing effect of the construction joint is fulfilled equally. Reliable sealing of construction joints, cracks in construction joints can be filled via Polyinject Hose PVC.

STORAGE & SHELF LIFE

Membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sun light and UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life

HEALTH & SAFETY

Watertite S2012 contains a tacky Bitumen compound which can stick to human skin during application. such stains can be removed by using a cloth dipped in a suitable cleaner

DISPOSAL

Watertite S2012 is non-hazardous, non-flammable and therefore can be disposed into any regular disposal area. However, it should be disposed only after wrapping with paper, plastic or cloth as the modified Bitumen has a tendency to soften under heat and pressure which would make further handling very tough. All disposal practices must be in compliance with all local law and regulations.

SUPPLY

	Packing	Unit
Bitustick R3000	8m x 1 m x 3mm	Roll
Bitustick R400	8m x 1 m x 3.5mm	Roll
Watertite TS 15	10m x 100mm x 1.5mm	Roll
Polyprime SB	20 Ltr	Pail
Bitumastic	20Kg	Pail
Polyinject Hose PVC	100m	Roll

TECHNICAL SPECIFICATION - SYSTEM

PROPERTIES	VALUES	TEST STANDARDS
Thickness, mm	9.5	EN 1849-1
Tensile strength, (L/T), [N/5cm]	> 1800/1500	ASTM D 5147
Peel adhesion to freshly poured concrete, [N/mm]	>5	ASTM D 1000
Tear Resistance, (L/T), [N]	> 1300/1100	ASTM D 5147
Puncture resistance, [N]	>2700	ASTM E 154
Resistance to hydrostatic pressure, 7 bar	No leakage	EN 12390-8
Low temperature flexibility @ -15°C	No cracks	ASTM D 1970
Chemical resistance	Excellent resistance to chlorides, sulphates, alkalis and acids	ASTM D 543

TECHNICAL SPECIFICATION - COMPONENTS

PROPERTIES	BITUSTICK R400		BITUSTICK R3000	
	VALUES	TEST STANDARDS	VALUES	TEST STANDARDS
Thickness, [mm]	3.5	DIN EN 1849-1	3	DIN EN 1849-1
Tensile strength [L/T]	>700/550 N/5cm	DIN EN 12311-1	55/45 N/mm ²	ASTM D 412
Elongation [L/T], [%]	40/50	DIN EN 12311-1	300 (film)	ASTM D 638
Softening point, [°C]	>105	ASTM D 36	>105	ASTM D 36
Tear Resistance (L/T), [N]	500/450	ASTM D 5147	>300 N/mm	ASTM D 1004
Resistance to hydrostatic pressure, 5 bar	No leakage	BS EN 12390	No leakage	ASTM D 5385
Water Absorption [BSP], [%]	<0.5	ASTM D 5147	< 0.15	ASTM D 570
Puncture resistance, [N]	>1800	ASTM E 154	>700	ASTM E 154
Low temperature flexibility, [°C]	<-10	ASTM D 5147	0	ASTM D 5147
Chemical resistance	pH 2.5-11.5	ASTM D 543	pH 2.5-11.5	ASTM D 543

All values given are subject to 5-20% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

