

Watertite S2005

Multi layer self adhesive waterproofing system

Bituminous waterproofing membrane system for structure upto 5 meter depth

CHARACTERISTICS

- ▶ Excellent adhesion of the top layer polypropylene fleece with concrete forms a part of the concrete structure.
- ▶ Multilayer waterproofing protection to water ingress under 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

Self-adhering waterproofing system comprising of multilayer application designed for shallow structures, which are occasionally subjected to hydrostatic pressure and are up to 5 meter deep from the ground level. Watertite S2005 is specifically designed for ease in application and as a highly efficient system to prevent the ingress penetration of water into the structure.

FIELDS OF APPLICATION

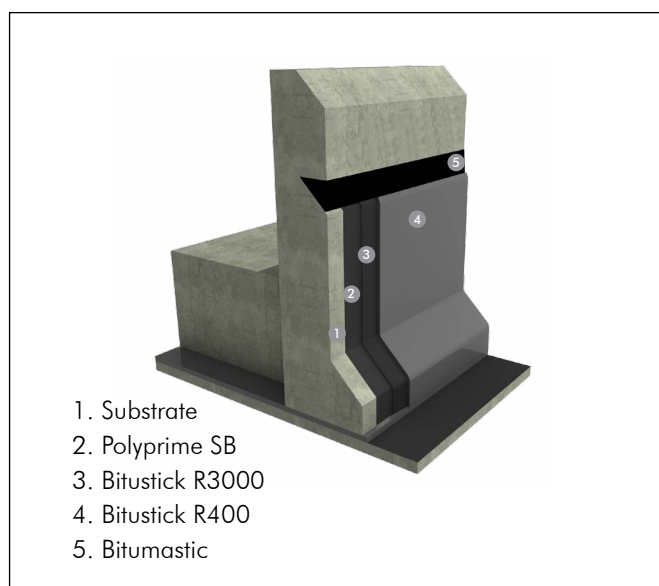
- residential buildings
- buildings and villas
- box culverts

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 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.



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

Priming

Apply Polyprime SB solvent-based primer at a coverage of 4-6 m²/liter to the prepared clean smooth and dry surface by brush, roller or spray. allow the primer to dry prior to the application of the membrane.

Installation

Provide a minimum 200 mm wide reinforcing strip of Bitustick R3000 over the cement sand angle fillet in all the corners. Start installation from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. 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 self-adhesive side and start unrolling the membrane and press it to the surface simultaneously while unrolling. Smoothen the membrane from the center to the edges with a wooden press in order to remove entrapped air. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base surface. Over laps shall be a minimum of 100mm. 2nd Layer / Protection Membrane – Bitustick R3000 membrane to be protected with a self-adhesive protection membrane Bitustick R400, which not only protects the previous layers but also acts as a second layer of waterproofing to the system. The presence of polypropylene fleece on the Bitustick R400 membrane will ensure complete adhesion with

the underside of the freshly placed concrete. Apply Bitutape TS on the end joints and cut joints (wherever selvedge is not available) of Bitustick R400 prior to laying of membrane. Bitustick R400 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. Unroll and align Bitustick R400 membrane on 1st 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.

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 S2005 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 S2005 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 1m x 3mm | Roll |
| Bitustick R400 | 8m x 1m x 3.5mm | Roll |
| Bitutape TS | 10m x 100mm x 1.5mm | Roll |
| Polyprime SB | 20 L | Pail |
| Bitumastic | 20Kg | Pail |

TECHNICAL SPECIFICATION - SYSTEM

| PROPERTIES | VALUES | TEST STANDARDS |
|--|--|----------------|
| Thickness, mm | 6.5 | EN 1849-1 |
| Tensile strength, [L/T], [N/5cm] | > 1300/1000 | ASTM D 5147 |
| Peel adhesion to freshly poured concrete, [N/mm] | >5 | ASTM D 1000 |
| Tear Resistance, [L/T], [N] | >1000/800 | ASTM D 5147 |
| Puncture resistance, [N] | >2600 | ASTM E 154 |
| Resistance to hydrostatic pressure, 5 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.