

DUALSEAL®

Site-friendly, dual-sealing, below-grade waterproofing system.



DUAL SEAL®

The most unique dual waterproofing system available today.

The DUAL SEAL® waterproofing sheet membrane combines the strength, chemical and puncture resistance of high density polyethylene (HDPE) with the expanding self-sealing capabilities of Sodium Bentonite Clay, to form the most unique waterproofing system on the market today. Dual Seal® products have been used throughout the world to control water ingress in below grade areas of all types of building and civil engineering structures. Proven quality, minimal jobsite preparation time and ease of installation have made Dual Seal® products worldwide market leaders in the waterproofing industry.

USAGE

The HDPE and Sodium Bentonite are laminated together to form a tough sheet membrane. It is easily installed and typically applied on below grade civil engineering constructions such as: sub level walls, cut and cover tunnels, under structural slabs and subways.



LIFE EXPECTANCY

Sodium Bentonite
(Already millions of years old)

?

High Density Polyethylene
(EPA Estimates)



ADVANTAGES

ANTI TRACKING

Prevents tracking of water between membrane and concrete surfaces.

HYDRO RESISTANCE

Resistance to hydrostatic water head of 46 m.

LONG LIFE EXPECTATION

Over 100 years of life expectation

PUNCTURE RESISTANCE

Dual Seal® has a very high puncture resistance.

ENVIRONMENTALLY CONSCIOUS

Dual Seal® is non-toxic and therefore very environmentally friendly.

EASY APPLICATION

quick and easy installation over green concrete. Does not require priming and heat welding.

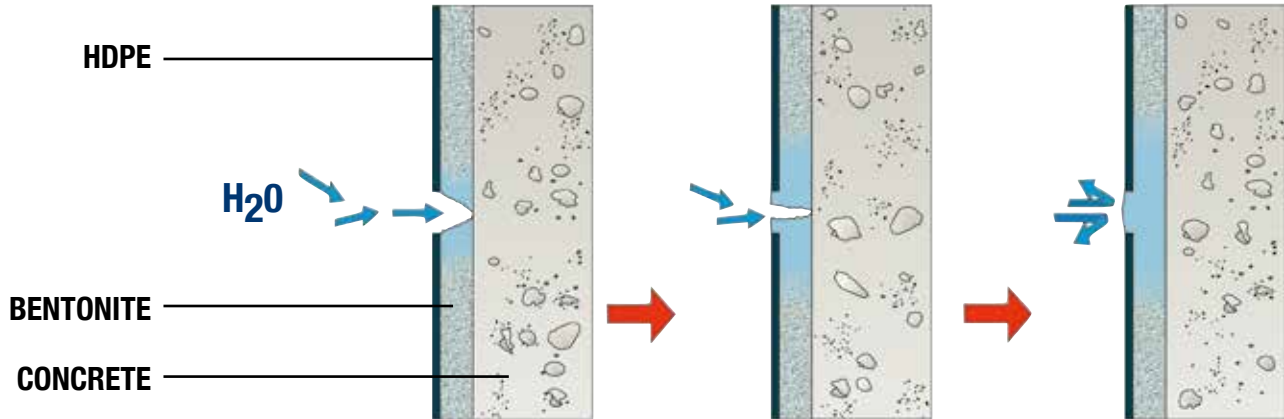
TEMPERATURE STABILITY

Installation temperature -30°C to +55°C.

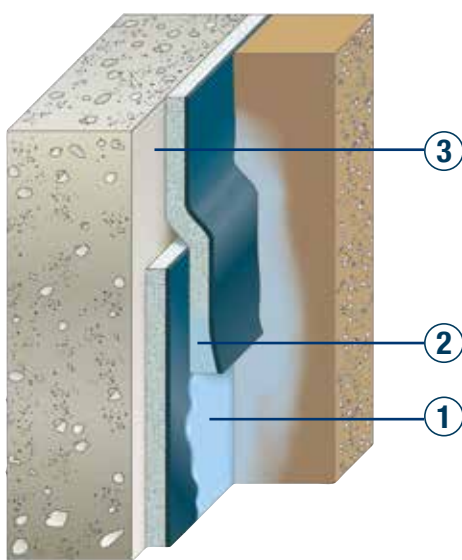
SELF HEALING

SELF HEALING OF MECHANICAL DAMAGE

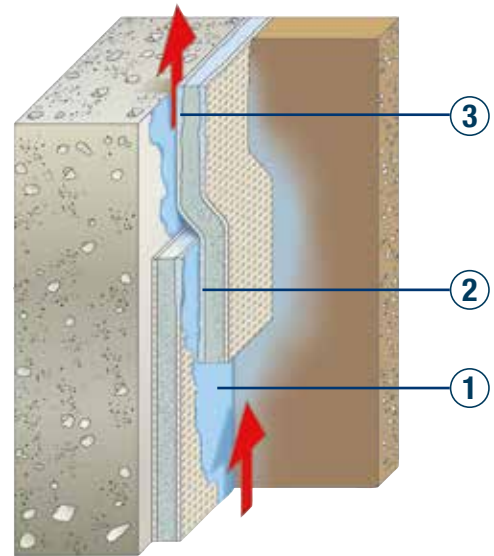
- Water enters the damaged HDPE membrane.
- The Sodium Bentonite starts to react with the water and begins the sealing process.
- Within a short period of time, the entire damaged area is covered with expanded Sodium Bentonite and forms a 100% watertight seal.



DUAL SEAL[®] vs GEOTEXTILE BENTONITE SYSTEM



1. Water enters
2. Bentonite hydrates preventing further water penetration
3. **No tracking of water between membrane and concrete.**



1. Water enters.
2. Bentonite hydrates.
3. **Geotextile fabric allows for tracking of water between membrane and concrete.**

THE DUAL SEAL[®] SYSTEM

The Dual Seal[®] membrane is available in three different types: **Standard, Saltwater and Lagging Grade (LG)**. The Dual Seal[®] LG is especially designed for blindside installations or where shotcrete is to be blown directly to the face of the membrane, whereas the Saltwater type is used in Saline and/or brackish water conditions. Sodium Bentonite, granules, waterstops, self-swelling mastic and other accessories complete the Dual Seal[®] system.

TECHNICAL DETAILS*

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Supply	1,22 m x 7,32 rolls	D638 type 4 Dumbell
Colour	grey / black	
Total membrane thickness	3,5 - 4 mm	
Membrane swelling capacity (Sodium Bentonite)		
Resistance to micro organisms (Bacteria, fungi, mould, yeast)	Unaffected	
Freeze/thaw cycles	no effect before or after installation	
Installation temperatures	-30°C to +55°C	
Non toxic	do not ingest	
% Elongation-ultimate failure of membrane	700%	FTMS 101B
Tensile strength: membrane N/mm ²	27,50	ASTM D412
Puncture resistance	43 kg	ASTM D751 Method
Resistance to hydrostatic water head	46 m	
Resistance to water migration under membrane	no penetration	
Water migration at or through joint	no penetration / instant seal	
Permeance hydraulic conductivity (entire membrane)	2,7 x 10 ⁻¹³ cm/sec.	

* Above based on 20 mil HDPE/Bentonite System.

This brochure is not intended to establish product recommendations for any installation. To the best of our knowledge the information contained herein is true and accurate at the time of issue, but is subject to change without prior notice. No part of this brochure may be copied without written authorisation of the RPM Belgium Vandex Group®.

WARRANTY

The RPM Belgium Vandex Group® warrant all goods to be free from defects and will replace materials proven to be defective. The given information corresponds to our present standard of knowledge. However, it is the buyer's responsibility to determine the suitability of the products in individual cases by conducting own tests.

The RPM Belgium Vandex Group® is a subsidiary of RPM Inc., USA, a public owned American company. The RPM Belgium Vandex Group® is a leading manufacturer of industrial flooring systems, waterproofing products, coatings, sealants and membranes. RPM Belgium Vandex Group® is certified by Lloyd's as a ISO 9001 company and all products are controlled according to the ISO 9001 quality standard.

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