

# DUALPROOF A WATERPROOFING MEMBRANE

Pre-applied waterproofing sealing system based on TPO/FPO

## PRODUCT DESCRIPTION

The DualProof A Membrane System consists of a special non-woven PP-Fleece, which is co-extruded with a highly flexible, water and gas resistant, TPO-FPO membrane. The fresh concrete forms a mechanical bond with the PP-Fleece and prevents water tracking between the membrane and the concrete. The DualProof A Membrane System is a new, high quality technology and it has been specifically designed for the waterproofing and protection of below ground reinforced concrete.



## APPLICATIONS

DualProof A may be used in all applications, where reinforced concrete structures must be protected against groundwater and contaminations. It is suitable for waterproofing of foundations, basements, tunnels, parking decks and all other concrete structures below grade. DualProof A can be used in saline soil or alkaline environments due to its chemical resistance.

## HOW DOES DUALPROOF A WORK?

The fresh concrete mechanically bonds to the PP-fleece on the DualProof A System, creating a full and durable bond with the cured concrete. The high mechanical bond between the PP-Fleece and the concrete prevents any lateral water migration between the membrane and the cured concrete. DualProof A is installed before the steel reinforcement is placed, and the concrete is poured.

## FEATURES AND BENEFITS OF THE DUALPROOF A MEMBRANE SYSTEM

- ☞ DualProof A Membrane System is a strong, highly-flexible TPO/FPO waterproofing membrane which forms a permanent mechanical bond with freshly poured concrete
- ☞ May be used in salt-water areas to protect the concrete structure.
- ☞ May be used as a supplementary method for high-quality use (A + to A +++) in WU constructions
- ☞ Used for water pressure-tight surface sealing of (WU) concrete structures
- ☞ External barrier, for the waterproofing and protection of floor slabs and exterior concrete wall surfaces against soil moisture.
- ☞ Barrier against radon or radon gas
- ☞ Tough and resistant
- ☞ fast and easy to install
- ☞ High compound shear strength
- ☞ Quality controlled / CE-Certification in acc. to EN 13967 (more test reports are available on request)
- ☞ Crack bridging up to 3.2 mm
- ☞ Tested up to 6.9 bar water pressure
- ☞ Cold flexibility down to -30 °C; High thermal stability up to +90 °C
- ☞ May be installed in all weather conditions (in acc. to the application guideline)
- ☞ Working temperature: +5°C until +50°C (without additional requirements)
- ☞ Lightweight, versatile- and easy on-site handling
- ☞ Protects concrete against chemical, salt and sulphate attack

## APPROVALS



- 📄 CE Marking in acc. to DIN EN 13967
- 📄 General German Test Report
- 📄 DualProof A can be used in construction joints and has been tested as a surface sealing system that is water tight for joints and cracks up to 3.2 mm and a water pressure of up to 6.9 bars.

## FORM OF DELIVERY

DualProof A Membrane rolls / pallet are individually wrapped in foil.

DualProof A Membrane should be stored in its original packaging. DualProof A should be kept dry and protected from direct sunlight, snow, ice, water, heat or heat sources. The storage temperature should be between + 5 ° C and + 30 ° C.

Do not stack any sharp items or additional pallets on top of the other DualProof A Membrane pallets during transport and storage.

Please refer to the product label for production date and identification number.

	ARTICLE NUMBER	WIDTH	LENGHTS	UNITS	OVERLAPPINGS
DUALPROOF A	25-350	1.50 M	20 M	14 ROLLS/ PALLET	BUTYL-EDGE

	GROSS AREA	NET AREA	THICKNESS
DUALPROOF A	30 M <sup>2</sup> PER ROLLE	APP. 28.00 M <sup>2</sup> PER ROLL	1.7 MM MEMBRANE FPO-PP: 0.8 MM

## TECHNICAL DATA

PRODUKT TYPE	DUALPROOF A			<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>CE</b> 0799-CPR-233                 </div>
Produkt Type	DualProof A			
Intended use	EN 13967 – Flexible membrane for waterproofing (concrete structures)			
	Type A and Type T Waterproofing membrane with moisture barrier and groundwater barrier			
Material	DUALPROOF A	nonwoven		
Visible defects	DUALPROOF A	no visible defects	✓ passed	
Straightness	DUALPROOF A	≤ 75 mm / 10 m	✓ passed EN 1848-2	
Mass	DUALPROOF A	0.870 kg/m <sup>2</sup> (without butyl strip)	(+/- 75 g/m <sup>2</sup> ) EN 1849-2	
Thickness	DUALPROOF A	1.7 mm (Membrane: 0.8 mm)	(+/- 10%)	
Resistance against lateral water flow	DUALPROOF A	≤ 600 kPa (F3 concrete)	✓ passed DIN EN 12390-8 / ASTM D 5385	
Water tightness	DUALPROOF A	690 kPa	✓ tight ASTM D 5385	



		60 kPa / 24h		EN 1928 (B)
		500 kPa / 72h		EN 1928 (B)
	DUALPROOF A	12 weeks / 70 °C; 60 kPa / 24h	✓ tight	EN 1296 EN 1928 (B)
	DUALPROOF A	28 d / +23 °C; 60 kPa / 24h	✓ tight	EN 1847 EN 1928 (B)
Compatibility with bitumen	DUALPROOF A	28 d / +70 °C; 60 kPa / 24h	✓ tight	EN 1548 EN 1928 (B)
Water tightness Crack bridging	DUALPROOF A	mechanical bond with concrete 6.9 bar / 3.2 mm	✓ tight	ASTM D 5385
Water vapour transmission		<b>g</b>	<b>Sd</b>	<b>μ</b>
	DUALPROOF A	6,23 <sup>10-9</sup> kg/(m <sup>2</sup> s)	64 m	79000
Tensile strength MD / CMD	DUALPROOF A	540 / 470	N/50mm	EN ISO 12311-2 (A)
Tensile strength elongation MD / CMD	DUALPROOF A	40 / 50%		EN ISO 12311-2 (A)
dimensional stability MD / CMD	DUALPROOF A +	±1.5 / ±0.8 %		EN 1107-2
Shear resistance in the overlap		Collapse outside of the overlapping:		
	DUALPROOF A	≥ 150	N/50mm	
Resistance to impact	DUALPROOF A	250 800	mm	EN 12691 (A) EN 12691 (B)
Tear resistance MD / CMD	DUALPROOF A	≥ 300 / 300	N	EN 12310-1
Resistance to static load	DUALPROOF A	20kg / 24h		EN 12730 (A)
		20kg / 24h	✓ passed	EN 12730 (B)
Crack bridging ability	DUALPROOF A	3.2	mm	✓ passed ASTM D 5385
Reaction to fire	DUALPROOF A	Class E		EN ISO 11925-2 EN 13501-1

### ADDITIONAL INFORMATION

Our TPO/FPO-PP has a very slow decomposition time. The basic materials PP are thermoplastics known for their recyclability. Please see the DualProof A installation guideline for detailed application instructions.



### **Substrate pretreatment**

The substrate for the DualProof A membrane needs sufficiently stabilized to avoid movement during the construction works. A smooth, uniform and clean substrate surface is essential to prevent membrane damage. Large gaps > 12mm and voids must be closed before installation of the DualProof A membrane system. The substrate can be damp or slightly wet, but ponding water must be avoided.

Some examples of suitable substrates to fix the DualProof A membrane system onto are:

- Concrete surfaces
- Formwork
- Plywood
- Compacted soil

All corners, up-stands, pipe / service penetrations, etc. must be detailed correctly (please consult our Technical Department for further advice) prior to the application of the membrane.

DUALPROOF A Membrane is designed for use with structural reinforced concrete. The concrete should be designed by a Structural Engineer to EN 1992. Please ensure that the concrete is placed and cured correctly, and that all non- movement construction joints are detailed with CEMflex Active Waterstop or Quellmax Bentonite Waterstop Tape.

### **Application of DualProof A Membrane**

The edges of the membrane should be overlapped by a minimum of 80mm and the ends of the rolls staggered by a minimum of 300mm. The installed membrane should be inspected for damages prior to the placement of the concrete. In the unlikely event of damage occurring to the membrane, repairs may be completed by simply placing and bonding a (repair) over the damaged area using for example our Butyltape.

The installed membrane may be cleaned using a soft-brush and/or a low-pressure cold water. All standing water or any construction debris must be removed from the membrane prior to placing the concrete.

### **General Advice**

Application temperature: +5°C until +50°C

The (above) mentioned temperatures constitute the generally valid area in which no additional measures need to be taken during application.

### **Environment and Health**

This product does not represent a hazardous substance within the meaning of the EU Hazardous Substances Regulation. A safety data sheet for transport, placing on the market and use is available on the request.

### **Dangers and Safety**

The essential safety, toxicological, physical and ecological data for the handling of DualProof A can be taken from the product-specific safety data sheets.

### **Data**

All technical data stated in this product data sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

### **Disclaimer**

All above mentioned Information concerning BPA-products, especially any recommendations and advices relating to the application and use of BPA products are given in good faith based on BPA's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with BPA's recommendations.

In practice, the differences in materials, actual site conditions and other factors outside are such that no warranty nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended



application and purpose before proceeding with the full application of the products. BPA reserves the right to change the properties of its products without notice. Users must always refer to the most recent issue of the Data Sheet for the product concerned, copies of which will be supplied on request. All sales of BPA products are subject to our current terms and conditions.

**Local Restrictions**

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local product data sheet for the exact description of the application fields.

