

## **DR. SEAL POLYMER (APP) MODIFIED WATERPROOFING MEMBRANES**

### **PRODUCT DESCRIPTION**

**Dr. SEAL APP** and **DR. SEAL APP MINERAL** are bituminous plastomeric torch-on waterproofing membranes. They consist of a selected bitumen modified with plastomeric polymers, reinforced with a linear reinforced composite polyester carrier, which offers good characteristics of mechanical resistance, ultimate-elongation and dimensional stability. The APP modified bitumen assures good flexibility at low temperatures and outstanding resistance to heat and UV rays. The whole Dr. SEAL membrane range is CE-marked and manufactured under a closely controlled system conforming to ISO 9001 requirements and guidelines.

**Dr. SEAL APP has obtained the Agreement Technique Certificate from ITC (the Italian Board of Agreement, member of UEAtc)**

### **PRODUCT USES**

**Dr. SEAL** membranes are versatile and easy to install. **Dr. SEAL APP** is suitable to be used as single layer or top layer in industrial, commercial or residential waterproofing (with or without thermal insulation). It can also be used as damp-proof course to prevent moisture raising.

**Dr. SEAL MINERAL** is suitable to be used as exposed upper layer.

### **PRODUCT PRESENTATION**

The underside of **Dr. SEAL APP** and **Dr. SEAL APP MINERAL** is finished with a thin slightly embossed thermo-fusible film, which easily melts upon torching, favouring a rapid and clean application. The upper side of the **MINERAL** version is finished with a uniform

layer of factory-applied natural or coloured slate granules and is provided with a lateral selvage for overlapping. The upper side of the **PLAIN** version is covered with extra-fine sand or (on request) PE film or fine talc.

### **PRODUCT PACKAGING**

The product is delivered in vertical rolls (1m width) marked with an upper adhesive tape (with product name) a lower adhesive tape (with product weight / thickness) and a sticker with data concerning CE marks and lot traceability. The rolls are vertically packed on a pallet and wrapped with a robust shrink foil.

Always store the rolls in upright position, preferably under shelter. Do not stock the product at site at night during the cold season. Avoid any abrupt impact with the ground when unloading / unrolling the material.

## FIELDS OF APPLICATION IN ACCORDANCE WITH "CE" MARK

### EN 13707

**Reinforced bitumen sheets for roof waterproofing.**

• **Under layer or intermediate layer in multi-layer systems without permanent heavy surface protection**

- Dr. SEAL APP 4 mm

**Single-layer under heavy protection**

- Dr. SEAL APP 4 mm

• **Upper layer in multi-layer systems without permanent heavy surface protection**

Dr. SEAL APP 4 mm

Dr. SEALAPP 4 mm MINERAL

### EN 13969

**Bitumen damp proof sheets including bitumen basement tanking sheets.**

- DR. SEAL APP4 mm

## PRODUCT APPLICATION

The application is by torch bonding using appropriate tools as a propane gas burner (with safety valve), a trowel with rounded edges, a knife, security gloves and shoes.

Surfaces must be perfectly dry, clean and sufficiently plain or levelled. Prior to adhering the membrane to the substrate, the latter must

be primed with either Dr. SEAL Bitumen primer or (approx 300grms/sqm). The product is welded down burning off the underside film and melting down part of the bituminous undercoating. Overlaps have to be welded by torching with side laps of 8-10cm and end laps of 12-15 cm. Stop installation in rain, snow, heavy fog or if the air temperature falls below +5°C.

**PLASTOMERIC POLYMER (APP) MODIFIED WATERPROOFING MEMBRANES**

CHARACTERISTICS	NORMS	U.M.	TEST	RESULTS	TOLERANCE
			Dr. SEAL APP	Dr. SEAL APP Mineral	
Norms	/	/	EN 13707 + EN 13969	EN 13707	/
Compound (1)	/	/	BPP	BPP	/
Carrier Type	/	/	Polyester	Polyester	/
Upper Surfacing	/	/	Sand	State chip	/
Lower Surfacing	/	/	PE Film	PE Film	/
Uses (2)	/	/	SS - SF - SP - F	SF	/
Application	/	/	Torch	Torch	/
Visible defects	EN 1850-1	-	Pass	Pass	/
Length	EN 1848-1	m	≥ 10 -1%	≥ 10 -1%	/
Width	EN 1848-1	m	≥ 1 -1%	≥ 1 -1%	/
Straightness	EN 1848-1	-	Pass	Pass	± 10%
Weight	EN 1849-1	kg/m <sup>2</sup>	/	5,1	± 0,2 mm
Water tightness	EN 1928:2000	-	Pass	Pass	/
Ageing test	EN 1296 + EN 1928	-	Pass	Pass	/
Ext. Fire rating	EN 13501-5	-	F roof	F roof	/
Fire rating	EN 13501-1	-	CLASS F	CLASS F	/
Shear resistance of joints					
- headoverlaps	EN 12317-1	N/50 mm	860	860	-20%
- sideoverlaps			590	590	-20%
Maximum tensile force					
- Strength Long.		N/50 mm	960	960	20%
- Strength Transv	EN 12311-1	N/50 mm	690	690	20%
- Elongation Long.		%	45	45	-15 pp
- Elongation Transv		%	48	48	-15 pp
Impact resistance	EN 12691	mm	1000	1000	/
Resistance to static loading	EN 12730	kg	15	15	/
Resistance to tearing					
- Long.	EN 12310-1	N	150	150	-30%
Dim. Stability	EN 1107-1	%	≤ 0,5	≤ 0,5	/
Cold flexibility	EN 1109	°C	-15	-15	/
Thermal flow resistance	EN 1110	°C	120	120	/
Artificial ageing by long					



term exposure to elevated temperature	EN 1296 +	° C	-10	-10	+10%
	EN 1109				
Artificial ageing by long term exposure to elevated temperature	EN 1296 +	° C	110	110	-10%
	EN 1109				
Adesion of granules	EN 12039	Loss %	/	< 30	/
Permeability	EN 1931	-	μ = 20.000	μ = 20.000	/

(1) (APP) Plastomeric polymer; (SBS) Elastomeric polymer - (2) SS - Under layer; F - Foundations; SP - Under heavy protection; SF - Top layer