TECHNICAL DATASHEET

PARAFLEX

FM APPROVED

CE

Nature of product

Bitumen-polymer elastomer waterproofing membranes (SBS). The prefabricated membranes of the PARAFLEX series are created in the black versions, PARAFLEX NT, with reinforcement in non-woven polyester reinforcement with continuous filament stabilised with mineral fibres and thicknesses 4 mm, and in the self-protected ones with slate flakes, PARAFLEX ARD/S and PARAFLEX ARD/HS, both with reinforcement in non-woven polyester fabric with continuous filament stabilised with mineral fibres, respectively weighing 4.5 kg/m^2 and thickness of 4 mm excluding slate. Both sides of the black membranes are coated with the thermo-fusible film TERMOTENE, in the slate ones only the lower one.

The specific formulation of the bitumen-polymer elastomer compound guarantees good mechanical performance, flexibility at low temperatures (-25 °C), resistance to fatigue and breakage elongation of the compound above 2000%. The membranes of the PARAFLEX Series are produced in rolls, taped and accompanied by a Quality Control Certificate. They comply with the requirements for CE marking where required. They do not contain asbestos, tar or other dangerous substances.

Certifications

The PARAFLEX prefabricated waterproofing membranes in polymer-bitumen and elastomer, already accompanied by the Technical Certificate of Qualification issued by ITC according to the UEAtc European directives (Union Européenne pour l'Agreement Technique dans la Constrction), are also certified with APPROVAL REPORT FM - FACTORY MUTUAL RESEARCH, prestigious institute of control of Boston (USA). In addition, BBA Agrèment Certificate 09/4688 that PARAFLEX membranes will have a service life in excess of 25 years. The PARAFLEX ARD/HS membrane passes the test according to EN 1187-2, with the BROOF classification (t2) according to EN 13501/5. All PARAFLEX membranes are in conformity with CE marking certified by Bureau Veritas Certification.

Intended use

PARAFLEX membranes are suitable for the creation of waterproofing works of various types. In particular, PARAFLEX membranes are specifically used in harsh climates or during cold seasons. Moreover, compared to the use on roofs and in foundations, the different versions can be used with reference to the following diagram [(1)].
For clarification on the systems that can be obtained, consult the Technical Services of IMPER ITALIA srl.

PRODUCTS	FIELDS OF USE [(1)]								
	Roofing (EN 13707)						Under-tile (EN 13859-1)	Steam control (EN 13970)	Foundations (EN 13969)
	Exposed			Roof gardens	Under heavy-duty protection				
	Single-ply	Multi-ply		Root-resistant	Single-ply	Multi-ply			Multi-ply
		Upper	Lower						
PARAFLEX NT4			•		•	•			•
PARAFLEX ARD/S		•					•		
PARAFLEX ARD/HS	•	•					•		

(1) In compliance with the applicable AISPEC/SITEB-MBP Guidelines.

Application procedure

PARAFLEX membranes are flame-installed before priming with a suitable primer or, only for versions with polyester reinforcement, with mechanical fixing. The application methods are a determining factor capable of characterising the performance of the waterproof covering itself. In general, particular care must be given to performing of sealing between the sheets always laid with staggered joints; the lateral joints must be installed with overlap of 8 ÷ 10 cm and the end joints with overlapping of 12 ÷ 15 cm. The bitumen-polymer elastomer compounds have poor resistance to U.V. Therefore, when heavy protection is not provided, the exposed membrane must be of the self-protected type. In the design and execution of waterproofing it is advisable to use a homogeneous system in SBS membrane. For correct and detailed documentation, as well as to identify the most effective intervention solutions in all circumstances, we recommend consulting the Technical Services of IMPER ITALIA srl which are in any case available for the consultation of particular problems as well as to provide all the assistance necessary for the best use of these materials.

TECHNICAL SPECIFICATIONS (1)

Specifications	EN Standards	Unit of Measure	Tolerances (1)	PARAFLEX		
				NT4	ARD/S (2)	ARD/HS (2)
Roll dimensions	1848-1	m	≥	10 x 1 (-1%)		
Thickness	1849-1	mm	±5%	4	-	4
Mass per unit area	1849-1	kg/m²	±10%	-	4.5	-
Watertightness	1928-B	kPa	≥	60		
Cold flexibility	1109	°C	≤	-25		
Flow resistance at elevated temperature	1110	°C	≥	+100		
L/T tensile strength	12311-1	N/5cm	±20%	800 / 600		
L/T tensile elongation	12311-1	%	±15 (3)	50 / 50		
L/T dimensional stability	1107-1	%	²	0.3 / 0,3		
Static puncture	12730	kg	≥	25	NPD (4)	25
Dynamic puncture	12691-B	mm	≥	1250	NPD (4)	1250
L/T tear resistance	12310-1	N	±30%	160 / 180		
Joint peel resistance	12316-1	N/5cm	±20 N	-	NPD (4)	-
Joint cut resistance	12317-1	N/5cm	±20%	RFG (5)	NPD (4)	RFG (5)
Durability after aging:						
• **Cold flexibility**	1296-1109	°C	+15°C	-10		
• **Flow resistance at elevated temperature**	1296-1110	°C	-10°C	+100		
• **UV Ageing**	1297	-	-	NPD (4)		
• **Watertightness**	1296-1928	kPa	≥	60		
• **Chemical resistance**	-	-	-	NPD (4)		
• **L/T tensile strength**	12311-1	N/5cm	±20%	700 / 500		
• **L/T tensile elongation**	12311-1	%	±15 (3)	45 / 45		
Steam permeability	1931	μ	≥	20,000		
Root resistance	13948		-	NPD (4)		
External fire behaviour	13501-5	EC (6)	-	Froof		Broof (t2)
Fire reaction	13501-1	EC (6)	-	E (7)		
Solar Reflectance Index (SRI)	ASTM Stardard E1980	%	-	81 (8)		

Notes: (1) In compliance with the applicable AISPEC/SITEB-MBP Guidelines.
(2) Upper finish in slate flakes standard colour Natural grey.
Other colours upon request Red, Green, White Reflecta.
(3) ±2 for Glass Mat reinforcements.
(4) Characteristic not determined because it is not relevant for use.
(5) RFG: Failure away from joint. Or ≥ 500.
(6) Euroclass.
(7) Internal report
(8) Only Reflecta White version, in heavy wind conditions

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