

**PARALON<sup>PLUS</sup> ST FIRE**



**Nature of product**

Prefabricated waterproofing membranes, obtained by coextrusion of the PARALLOY<sup>®</sup> compound based on metallocene resins with selected molecular weight dispersed in bitumen, suitably mixed with special non-toxic apyrogenic substances, and with a "non-woven" polyester reinforcement from a continuous filament with controlled dimensional stability with longitudinally positioned mineral fibres.

The particular formulation of the compound gives the PARALON<sup>PLUS</sup> ST FIRE membranes specific self-extinguishing and fire reaction properties; the remarkable performance of the reinforcement makes the membranes themselves suitable for waterproofing that require high mechanical strength. The PARALON<sup>PLUS</sup> ST FIRE membranes are available in the versions with the exposed talc-treated side (in thicknesses of 4 mm), and with the finishing of the upper side in slate flakes (with thickness 4 mm plus slate or with a mass per unit area of 4.5 kg/m<sup>2</sup>), in natural, green, red and WHITE REFLECTA Plus with high solar reflectance (SRI = 81%). The lower surface is instead always covered with TERMOTENE film, which facilitates application and improves the adhesion of the membranes to the substrate.

The PARALON<sup>PLUS</sup> ST FIRE membranes are produced in rolls, taped and accompanied by a Certificate of Quality Control. They comply with the requirements for CE marking where required. They comply with the requirements for CE marking where required. They do not contain asbestos, tar or other dangerous substances.

**Certifications**

The PARALON<sup>PLUS</sup> ST FIRE membranes, already accompanied by the Technical Qualification Certificate issued by ITC according to the UEAtc European Directives (Union Européenne pour l'Accord Technique dans la Construction), are also certified with the "Accord Technique avec Certification ATG n. 1364", issued by the Belgian institute UBAtc (Union Belge pour l'Accord Technique dans la Construction), member of the UEAtc.

The PARALON<sup>PLUS</sup> ARD/HS ST FIRE membrane passes the test according to EN 1187-2, with the B<sub>ROOF</sub> classification (t2) according to EN 13501/5.

**Intended use**

PARALON<sup>PLUS</sup> ST FIRE membranes are designed for waterproofing roofs where high performance waterproofing membranes with fire resistance characteristics are required. They are expressly suitable for the construction of roofs in presence of photovoltaic systems, in accordance with the requirements of the Fire Departments.

In particular, the PARALON ARD/HS<sup>PLUS</sup> ST FIRE membrane is B<sub>ROOF</sub> (t2) classified according to UNI EN 13501-5 on both combustible and non-combustible substrates and is therefore applicable both on flat and inclined roofs with any type of insulation, as well as on wood and/or metal, on cement and/or on bituminous laying surfaces.

The following diagram specifies its use with respect to the intended uses for which the CE marking is required. For clarification on the systems that can be created, consult the Technical Services of IMPER ITALIA srl.

PRODUCTS	FIELDS OF USE <sup>(1)</sup>						
	Roofing (EN 13707)					Subtile (EN 13859-1)	Foundations (EN 13969)
	Exposed		Roof gardens	Under heavy-duty protection			
	Single-ply	Multi-ply		Root-resistant	Single-ply	Multi-ply	
Upper		Lower					
PARALON NT4 <sup>PLUS</sup> ST FIRE	•	•	•		•	•	•
PARALON ARD/S <sup>PLUS</sup> ST FIRE		•					•
PARALON ARD/HS <sup>PLUS</sup> ST FIRE	•	•					•

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

## Application procedure

The PARALON<sup>PLUS</sup> ST FIRE membranes are installed via flame or mechanical fixing. The application methods are a determining factor capable of characterising the performance of the waterproof covering itself. In general terms, we remind you to carry out careful preparation and cleaning of the substrate followed by the priming treatment with a suitable primer (applied with a long-handled brush, roller, spray), with a consumption of 0.2 ÷ 0.3 l/m<sup>2</sup> and in any case variable with the degree of porosity of the substrate itself. The membrane will be applied with the aid of a propane gas torch; 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. 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

Specifications	EN Standards	Unit of Measure	Tolerances <sup>(2)</sup>	PARALON <sup>PLUS</sup> FIRE		
				NT 4	ARD/S <sup>(3)</sup>	ARD/HS <sup>(3)</sup>
Roll dimensions	1848-1	m	≥	10 x 1 (-1%)		
Thickness	1849-1	mm	±5%	4	-	4 + slate
Mass per unit area	1849-1	kg/m <sup>2</sup>	±10%	-	4.5	-
Watertightness	1928-B	kPa	≥	60		
Cold flexibility	1109	°C	≤	-15		
Flow resistance at elevated temperature	1110	°C	≥	140		
L/T tensile strength	12311-1	N/5cm	±20%	750 / 650		
L/T tensile elongation	12311-1	%	±15	50 / 50		
L/T dimensional stability	1107-1	%	≤	0.3 / 0.3		
Static puncture	12730-B	kg	≥	25	-	25
Dynamic puncture	12691-B	mm	≥	1000	-	1000
L/T tear resistance	12310-1	N	±30%	160 / 180		
Joint peel resistance	12316-1	N/5cm	±20 N	60		
Joint cut resistance <sup>(4)</sup>	12317-1	N/5cm	±20%	RGF or ≥ 500		
<b>Durability after aging::</b>						
• Cold flexibility	1296-1109	°C	+15°C	-10		
• Flow resistance at elevated temperature	1296-1110	°C	-10°C	130		
• UV Ageing	1297	-	-	Passes the test		
• Watertightness	1296-1928	kPa	≥	60		
• Chemical resistance	-	-	-	NPD <sup>(5)</sup>		
• L/T tensile strength	12311-1	N/5cm	±20%	650 / 550		
• L/T tensile elongation	12311-1	%	±15	45 / 45		
Steam permeability	1931	μ	≥	20,000		
Root resistance	LG Aispec	-	-	NPD <sup>(5)</sup>		
External fire behaviour	13501-5	EC <sup>(6)</sup>	-	BROOF (t1), BROOF (t2) <sup>(7)</sup>		
Fire reaction	13501-1	EC <sup>(6)</sup>	-	E <sup>(8)</sup>		
SRI		%	-	81 <sup>(9)</sup>		

**Notes:** (2) In compliance with the applicable AISPEC-SITEB-MBP Guidelines.

(3) Upper finish in slate flakes standard colour natural grey. Other Colours on request, red, green, WHITE REFLECTA<sup>PLUS</sup> (SRI = 81%).

(4) RFG: Failure away from joint.

(5) Characteristic not determined because it is not relevant for use.

(6) Euroclass.

(7) Certificate obtained with PARALON<sup>PLUS</sup> ARD/HS ST FIRE

(8) Internal Report.

(9) Only versions ARD/S and ARD/HS WHITE REFLECTA<sup>PLUS</sup>

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Considerando le diverse situazioni d'impiego dei prodotti e l'intervento di fattori da noi non dipendenti (supporti, condizioni di esercizio, in osservanza delle prescrizioni, ecc.), non è possibile alla IMPER ITALIA srl assumere responsabilità in merito ai risultati ottenuti. Il progresso unito alla costante ricerca dei massimi livelli prestazionali possono apportare - nel tempo - modificazioni alle informazioni contenute in questo stampato, senza che la IMPER ITALIA srl debba darne preavviso a tutti gli interessati.



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