SINCE 1928
Valli Zabban
WATERPROOFING SYSTEMS

CE

MULTIVAL PLUS 4 mm
MULTIVAL PLUS MINERALE 4 mm

COMPOUND

The MULTIVAL PLUS membranes are made up of a multi-layered polymer mix, the compound making up the waterproofing mass of the lower layer is made up of a mix of empty residual distilled bitumen modified with thermoplastic rubber (SBS) based on radial elastomers, synthetic compatibilizers and inert fillers. stabilizers. The compound constituting the upper layer is instead formed by a mixture of empty residual distilled bitumen modified by elastoplastomeric polymers based on atactic polypropylene, isotactic polypropylene, synthetic compatibilizers and stabilizing inert fillers. The compound is UV-resistant, thermally stable and particularly flexible at low temperatures.

REINFORCEMENT

The reinforcement used for MULTIVAL PLUS membranes is made up of a non-woven spundbond polyester mat stabilized with glass fibres, which gives the product very good mechanical characteristics, very good breaking elongation, as well as excellent dimensional stability. Such characteristics allow to use these membranes also on mechanically and thermally stressed surfaces.

OUTSIDE FINISHING

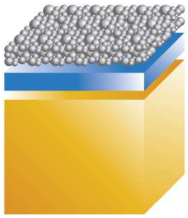
The MULTIVAL PLUS membrane is treated on the upper side with non-stick filler; other finishings such as polymeric film and non-woven may also be used. The MULTIVAL PLUS MINERALE membrane is finished on the upper side either with natural or coloured slate granules or with ceramic granules. The lower side of both of them is finished with PE torch-on film; other finishings such as aggregate, polymeric films, non-woven non-stick polymers may also be used. All self-protected slate bitumen membranes are subject to variations in color due to exposure to atmospheric agents. However, these variations will tend to gradually become uniform over time.

LAYING METHOD

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with VERVAL PRIMER (solvent based) or with ECOPRIMER (water based). The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 10 cm. on the sides and 15 cm. on top so that the roofing watertightness is granted**.**

USE

The MULTIVAL PLUS membranes are planned to be used as under and middle layer, single layer, top layer, under heavy protection and against humidity from soil

				
UMLM Under and middle layer membranes	**SLM** Single layer membranes	**TLM** Top layer membranes	**UHPM** Under heavy protection membranes	**MAHS** Membranes against humidity from soil

PACKAGING

PRODUCT	THICKNESS (mm)	WEIGHT (kg/m²)	ROLL DIM. (m) width x length	ROLLS per PALLET	m² per PALLET
MULTIVAL PLUS 4 MM	4	-	1 x 10	25	250
MULTIVAL PLUS MINERALE 4 MM	4	-	1 x 8	25	200

The published data are indicative average values of the current manufacture and can be modified by Valli Zabban S.p.A. without notice. The technical information come from our experience with regard to characteristics and use of the product. Given the many different uses and possible factors beyond our control which may intervene, we are not to be held responsible for the results. Purchasers have to assess under their responsibility if the product is suitable for the required use. The polymer bitumen membranes manufactured by Valli Zabban S.p.A. are based on bitumen coming from crude oil distillation and do not contain coal tar, asbestos or chlorine, they are recyclable and are not a dangerous waste. The polymer bitumen membrane which this data sheet refers to, is not subject to the obligation of safety profile issuing. An informative data sheet, inclusive of laying method instructions for a correct use of the product, is available on request and can be downloaded from our website: www.vallizabban.com.

Valli Zabban S.p.A. • Società Unipersonale • Capitale Sociale € 5.000.000 i.v.
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O.N. Notice code: 1370 (referred only to EN 13707 and EN 13969 norms)
FPC certificate number: 1370-CPR-0042 (referred only to EN 13707 and EN 13969 norms)
Reinforcement type: Non-woven spundbond polyester mat stabilized with glass fibres
Compound type: Bitumen modified with multi-layered polymer mix.
Surface finishing: Upper side: (MULTIVAL PLUS) non-stick fillers
(MULTIVAL PLUS MINERALE) slate granules / coloured slate / ceramic granules
Lower side: aggregate / PE / PP polymeric film, NON-WOVEN, non-stick polymers
Laying method: - For lower side finishing with aggregate, polymeric films, non-stick polymers, Non-Woven: Propane-gas light flame
- For lower side finishing with aggregate: hot glues, cold glues.

FOR A CORRECT USE OF THE PRODUCT PLEASE REFER ANYWAY TO THE MANUFACTURER'S TECHNICAL DOCUMENTS

TEST DESCRIPTION	STANDARDS	M / U	NOMINAL VALUES		TOLERANCES
			MULTIVAL PLUS 4 MM	MULTIVAL PLUS MINERALE 4 MM	
Reference norms			EN 13707 / EN 13969	EN 13707	
Use	-	-	UMLM / SLM / TLM / UHPM / MAHS	SLM / TLM /	-
Visible defects	UNI EN 1850-1	-	Pass the test	Pass the test	-
Length	UNI EN 1848-1	m	10,00 - 1%	8,00 - 1%	Min.
Width	UNI EN 1848-1	m	1,00 - 1%	1,00 - 1%	Min.
Straightness	UNI EN 1848-1	mm	20 mm x 10 m	20 mm x 10 m	Max.
Thickness	UNI EN 1849-1	mm	4	4	± 0,2
Mass per unit area	UNI EN 1849-1	Kg/m^2	-	-	± 10%
Watertightness (B method)	UNI EN 1928	Kpa	60 - Pass the test	60 - Pass the test	Kpa min. ≥ 10
External fire exposure behaviour	EN 13501-5	-	Froof	Froof	-
Reaction to fire	EN 13501-1	Class	NPD	NPD	-
Watertightness after elongation at low temperature	UNI EN 13897	%	NPD	NPD	Min.
Peel resistance of joints	UNI EN 12316-1	N/50mm	100	100	-20 N
Shear resistance of joints	UNI EN 12317-1	N/50mm	600 / 500	600 / 500	-20%
Water vapour transmission	UNI EN 1931	μ Sd (m)	20.000 NPD	- 390	- ± 60
Tensile strenght L/T (max load)	UNI EN 12311-1	N/50mm	800 / 630	800 / 630	±20%
Breaking elongation L/T	UNI EN 12311-1	%	45 / 45	45 / 45	± 15 absolute
Resistance to impact	UNI EN 12691	mm	800	800	Min.
Static loading (A method)	UNI EN 12730	Kg	15	15	Min.
Resistance to tearing L/T	UNI EN 12310-1	N	200 / 200	200 / 200	± 30 %
Dimensional stability L/T	UNI EN 1107-1 A method	%	±0,3	±0,3	Min.
Flexibility at low temperature upper/lower	UNI EN 1109	°C	-20 / -20	-20 / -20	Min.
Flow resistance at elevated temperature	UNI EN 1110	°C	100	100	Min.
Flexibility at low temperature after thermal ageing	UNI EN 1296 UNI EN 1109	°C	-15	-15	+15°C
Flow resistance at elevated temperature after ageing	UNI EN 1296 UNI EN 1110	°C	90	90	-10°C
Artificial ageing through long term exposure at UV radiations combined with temperature and heat	UNI EN 1297 UNI EN 1850-1	Visual	No defects-	-	Pass the test
Mineral surface adhesion	UNI EN 12039	%	-	Max loss 30%	Max value
Watertightness after artificial ageing through long term exposure at high temperatures	UNI EN 1296 UNI EN 1928	Kpa	NPD-	-	Kpa min. ≥ 10
Watertightness determination after exposure to chemical agents	UNI EN 1847 UNI EN 1928	Kpa	NPD	-	Kpa min. ≥ 10

The Company disclaimer can be consulted at the following link: www.vallizabban.com.

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