

Product:	Mastermax 3 START
Supplier:	MASTERPLAST Kft., 8143 Sárszentmihály, Árpád u. 1/a. (www.masterplastgroup.com)
Size, packaging:	1,5m*50m-75m <sup>2</sup> /roll
Application:	Vapour-permeable underlay for discontinuous roofings. Used as a subsidiary protective layer against moisture (liquid water penetration, wind-blown snow) and wind in pitched roof structures. The product is laid directly over the thermal insulation, parallel to the eaves with minimum 15cm overlapping and the grey, printed side to the roofing. The underlay is fixed along the rafters with counter battens (min. 50/50mm). These battens lift the tiling battens off the underlay and create an effective drainage path to the eaves.
Material:	Vapour-permeable and watertight funktionmembrane with polypropylene layer protection on both sides

Properties	Relevant standards	Technical data
Length	EN 1848 - 2	50m (-) 0%
Width	EN 1848 - 2	150cm (-)0,5% / (+)1,5%
Straightness	EN 1848 - 2	< 30 mm/10m
Mass per unit area	EN 1849 - 2	100g/m <sup>2</sup> (±15g)
Reaction to fire	EN 13501-1	E
Resistance to water penetration	EN 1928	W1
Water vapour transmission (Sd)	EN ISO 12572	0,05m; (±0,015m)
Tensile strength (MD/XD)	EN 12311-1	170N/5cm (±20%) / 100N/5cm (±20%)
Elongation at maximum tensile force (MD/XD)	EN 12311-1	~70% / ~70%
Resistance to tearing (MD/XD)	EN 12310-1	~70N / ~70N
Dimensional stability (MD/XD)	EN 1107	<3% / <3%
Flexibility at low temperature	EN 1109	(-)24°C
<b>Changing of properties after artificial ageing</b>		
Resistance to water penetration	EN 1928	W1
Tensile strength (MD/XD)	EN 12311-1	max. 30% / max. 30%
Elongation (MD/XD)	EN 12311-1	max. 25% / max. 25%
<b>Additional properties</b>		
Temperature resistance		(+)70°C
Resistance to UV		3 months

#### Storage and handling

Under dry conditions, protected against atmospheric exposure, especially sun-radiation and other heat sources as well as against moisture and rain.

#### Guarantee, warranty:

In accordance with the current legislations and the conditions of the distributor. The observation of the application rules of the product and presentation of the invoice constitute a prerequisite for possible future warranty claims. The installed underlay should not be left uncovered for longer than is absolutely necessary, but until finishing the roof covering, application of additional waterproofing (e.g. PE foil) is advised to ensure the protection of interiors against wetness. Masterplast Kft. shall be not liable for damages and neither for consequential damages resulting from water infiltration through the underlay during the construction period. Any damaged areas should be repaired or replaced before completion!

#### Standards, specifications

EN 13859-1, Planning and application guidelines of underlays (ÉMSZ 2006), Planning and installation guidelines (Masterplast Group Zrt.)

#### Health and safety

No labelling required in accordance with the relevant regulation (EC) No. 1907/2006 of the European Parliament and of the Council (REACH).

This datasheet corresponds to our current knowledge, experiences and general informations on the subject, but may be revised as new knowledge and/or experience becomes available. It does not imply any legally binding assurance. The product possesses the given technical characteristics. Since all variations of end-using of the product can not be anticipated, the designer/end-user's responsibility to make sure of the suitability of this product for particular purposes, structures.

**This technical datasheet is applied to products sold by Masterplast Kft. and valid until withdrawal or until modification.** Since this datasheet may be subject to revision, it is the responsibility of designer/end-user to make sure of possessing the latest version of the datasheet (\*see date of issuing). Most recent version of this datasheet can be also accessed under [www.masterplastgroup.com](http://www.masterplastgroup.com). Modification of the technical datasheet repeals the previously issued versions!