

DECLARATION OF PERFORMANCE

n. 001-23/B

1	Unique identification code of the product-type						
MM PULTRUDED STRUCTURAL PROFILES							
Structural profiles made of fibre-reinforced polymers (Fibreglass Composites/FRP)							
group	B	B1.1	CLOSED SECTION				
		B2.1	SINGLE LAYER				
code	section	dimensions	ID - identification code	code	Section	dimensions	ID - identification code
Q1	Square	50x50x5	53Q00500505-ISO-CE-B	O1	Circular	19x25,4	53O30260193_2-ISO-CE-B
R1	Rectangular	28x29x2,7-3,5	53R00280293_5-2_7-ISO-CE-B	O2	Circular	21,3x28	53O30280213_3-ISO-CE-B
R2	Rectangular	58x25x3	53R00580253-ISO-CE-B	O3	Circular	28x34	53O30340283-ISO-CE-B
R3	Rectangular	85x25x3	53R00850254-3-ISO-CE-B	O4	Circular	80x90	53O30800905-ISO-CE-B
R4	Rectangular	80x50x5	53R00800505-ISO-CE-B				

2	Intended use of the product as foreseen by the manufacturer
<p>MM Pultruded Structural Profiles are intended for use as structural elements (beams, columns) where the load-bearing characteristic is the main design criterion and where the product is part of a load-bearing system.</p> <p>The performance of structural profiles is given on the basis of short-term loads, at room temperature and without environmental influences.</p>	

3	Manufacturer
<p>M.M. srl a socio unico Via Antonio Zanussi 300/302 33100 Udine (Italy) Tel.: +39 0432 522 970 - Fax: +39 0432 522 253 www.mmgrigliati.com - info@mmgrigliati.it</p>	

5	System of assessment and verification of constancy of performance (AVCP)
1+	

6b	
European Assessment Document	EAD 260001-00-0303 aprile 2016
European Technical Assessment	ETA 21/0849 del 09/11/2021
Technical Assessment Body	ITC – CNR Via Lombardia, 49 20098 San Giuliano Milanese (MI) – Italia
Notified body	ITC – CNR CPR NB n. 0970
Certificate of constancy of performance 0970-CPR-0964/CE/1223	

7	Declared performance
---	----------------------


MECHANICAL RESISTANCE AND STABILITY (BWR 1)				
	Essential characteristic	Performance		
		Value		norm
		average	characteristic	
1	Full-section effective modulus of elasticity	28,65 GPa		EN 13706-2 annex D
2	Flexural strength – Axial	369,10 MPa	265,60 MPa	EN ISO 14125
	Flexural strength – Transverse	228,00 MPa	201,80 MPa	
3	Tensile strength – Axial	471,10 MPa	392,70 MPa	EN ISO 527-4
	Tensile strength – Transverse	92,50 MPa	86,90 MPa	
4	Tensile modulus of elasticity – Axial	30,54 GPa		EN ISO 527-4
	Tensile modulus of elasticity – Transverse	10,65 GPa		
5	Compressive strength – Axial	386,90 MPa	305,20 MPa	EN ISO 14126
	Compressive strength – Transverse	140,50 MPa	109,90 MPa	
6	Compressive modulus of elasticity – Axial	28,80 GPa		EN ISO 14126
	Compressive modulus of elasticity – Transverse	10,40 GPa		

7	Shear strength (perpendicular to plane)	No performance assessed		ASTM D7078
8	Shear modulus (perpendicular to plane)	No performance assessed		ASTM D7078
9	Inter-laminar (in-plane) shear strength – Axial	22,54 MPa	20,46 MPa	EN ISO 14130
10	Inter-laminar (in-plane) shear modulus	3,63 GPa		EN ISO 15310
11	Pin-bearing strength – Axial	161,78 MPa	131,20 MPa	EN 13706-2 annex E
	Pin-bearing strength – transverse	156,56 MPa	139,54 MPa	
12	Poisson's ratio – Axial	0,35		EN ISO 527-4
	Poisson's ratio – Transverse	0,08		
13	Thermal expansion – Axial	$10,8 \times 10^{-6} K^{-1}$		EN ISO 11359-2
	Thermal expansion – Transverse	$27,7 \times 10^{-6} K^{-1}$		
14	Fibre content by weight	68,47%		EN ISO 1172
15	Degree of cure - Differential scanning calorimetry (DSC)	100%		EN ISO 11357-1/3
16	Creep	< 6%		EAD 260001-00-0303
17	Reduction factors for stability and serviceability related to aging/environmental influence	The performance cannot be assessed according to EAD 260001-00-0303 §2.2.1.		
18	Reduction factors for effect of temperature	The performance cannot be assessed according to EAD260001-00-0303 §2.2.1.		
19	Reduction factors for long term loads	The performance cannot be assessed according to EAD 260001-00-0303 §2.2.1.		
20	Reduction factors for repeated loads	The performance cannot be assessed according to EAD 260001-00-0303 §2.2.1.		

SAFETY IN CASE OF FIRE (BWR 2)			
	Essential characteristic	Performance	
		Value	norm
21	Reaction to fire	Class E	EN 13501-2
22	Resistance to fire	No performance assessed	EN 13501-1

SAFETY IN USE (BWR 4)			
	Essential characteristic	Performance	
		Value	Norm
23	Impact resistance	Not applicable. <i>The essential characteristic refers to decks.</i>	EN 477
24	Definition of geometry and tolerances	Compliant	EN 13706-2

The performance of the product as above identified is in conformity with the declared performance.
This declaration of performance is issued according to REGULATION (EU) No 305/2011, under the sole responsibility of the manufacturer

Signed for and on behalf of the manufacturer by	
Emanuel Morandini	
Legal representative	