

DECLARATION OF PERFORMANCE

n. 001-23/C

1	Unique identification code of the product-type						
MM PULTRUDED STRUCTURAL PROFILES							
Structural profiles made of fibre-reinforced polymers (Fibreglass Composites/FRP)							
group	C	B1.1	CLOSED SECTION				
		B2.2	MULTI LAYER				
code	section	dimensions	ID – identification code	code	section	dimensions	ID – identification code
Q2	Square	65x65x8	53Q00650658-ISO-CE-C	Q5	Square	120x120x8	53Q01201208-ISO-CE-C
Q3	Square	80x80x8	53Q00800808-ISO-CE-C	Q6	Square	150x150x12	53Q015015012-ISO-CE-C
Q4	Square	100x100x8	53Q01001008-ISO-CE-C	R5	Rectangular	190,5x101,6x9,5	53R01901019_5-ISO-CE-C

2	Intended use of the product as foreseen by the manufacturer						
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.							
The performance of structural profiles is given on the basis of short-term loads, at room temperature and without environmental influences.							

3	Manufacturer						
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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						
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MECHANICAL RESISTANCE AND STABILITY (BWR 1)				
	Essential characteristic	Performance		
		Value		
		average	characteristic	norm
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	31,17 MPa	28,32 MPa	EN ISO 14130

10	Inter-laminar (in-plane) shear modulus	4,43 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	