

DECLARATION OF PERFORMANCE

n. 001-23/D

1	Unique identification code of the product-type						
MM PULTRUDED STRUCTURAL PROFILES							
Structural profiles made of fibre-reinforced polymers (Fibreglass Composites/FRP)							
group	D	B1.2	OPEN SECTION				
		B2.1	SINGLE LAYER				
code	section	dimensions	ID - identification code	code	section	dimensions	ID - identification code
C1	C-U	60x50x5	53C00600505-ISO-CE-D	PL1	Plate	40x5	53P00400050-ISO-CE-D
L1	Angle	35x35x5	53A00350355-ISO-CE-D	PL2	Plate	500x4	53P05000040-ISO-CE-D
L2	Angle	40x40x5	53A00400405-ISO-CE-D	CO	Handrail	60x60x5	53CE0600605-ISO-CE-D
L3	Angle	45x45x5	53A00450455-ISO-CE-D	GR1	Toe plate	55x5	53G00000555-ISO-CE-D
L4	Angle	50x50x5	53A00500505-ISO-CE-D	GR2	Toe plate	150x5	53G00001505-ISO-CE-D
L5	Angle	60x60x5	53A00600605-ISO-CE-D				

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 april 2016
European Technical Assessment	ETA 21/0849 date 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		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

SICUREZZA IN USO (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	