METRA	EXTRUSION ALUMINIUM ALLOY	EN AW-6106

The alloy type EN AW 6106 represents an excellent compromise to respond to the customer's requirements of good mechanical resistance, good weldability, high shape complexity through the section, containment of wall thickness for hollow extrusions and good superficial finish.
Its fields of use range from vehicle structures (space frame) to railway applications (structure of railway wagons) and shipping applications.

Physical characteristics

Volume mass :	2,70	g / cm^3
Lower melting point:	610	°C
Specific heat between 0° and 100°C:	930	J / Kg °K
Linear modulus of elasticity E:	69000	N / mm^2
Tangential modulus of elasticity G:	26000	N / mm^2

Thermal conductivity at 20°C	in state O: in state T6:	2,07 1,70	W / cm °K W / cm °K
Linear thermal expansion coefficient	- 20°C - 100°C: - 20°C - 200°C: - 20°C - 300°C:	$23{,}1 \cdot 10^{-6}$ $24{,}1 \cdot 10^{-6}$ $25 \cdot 10^{-6}$	1 / °K 1 / °K 1 / °K
Electrical resistivity at 20°C	in state O: in state T6:	3,13 3,4	μΩ · cm μΩ · cm

Chemical composition according to European Standard EN 573.3

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al
									Each	Total	
EN AW-6106	0,3 ÷ 0,6	0,35 max	0,25 max	0,05 ÷ 0,2	0,4 ÷ 0,8	0,2 max	0,10 max	---	0,05 max	0,10 max	rest

Minimum mechanical properties, according to European Standard EN 755.2

Types of profile	(1) Temper state	Diameter D [mm] for rods or thickness TH [mm] for bars or thickness of walls and for sections	Tensile strength Rm [MPa]		Limit elasticity load $R_{p0.2}$ [MPa]		Elongation	
			min	max	min	max	A % min	A_{50mm} % min
Full bars	The mechanical characteristics are not specified.							
Pipe	The mechanical characteristics are not specified.							
Profiles	T6 (*)	e ≤ 10	250	-	200	-	8	6

NOTE (*) for state F the values of the characteristics are just written as an indication
(1) see chart related to: "Description of the treatments and of the metallurgic states adopted in standard production"