



### TECHNICAL DATA-SHEET

**ALLOY DESCRIPTION:** EN AB ed AC 41000 - AlSi2MgTi

**ALLOY GROUP:** Al Si

**STANDARD:** UNI EN 1676 e 1706

#### CHEMICAL COMPOSITION %

Alloy	Elements	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Others each	Others tot.
EN AB 41000	Min	1,6			0,30	0,50						0,07		
	Max	2,4	0,50	0,08	0,50	0,65	0,05	0,05	0,10	0,05	0,05	0,15	0,05	0,15
EN AC 41000	Min	1,6			0,30	0,45						0,05		
	Max	2,4	0,60	0,10	0,50	0,65	0,05	0,05	0,10	0,05	0,05	0,20	0,05	0,15

#### MECHANICAL PROPERTIES - EN 1706:2020

CASTING PROCESS	TEMPER DESIGNATIONS	TENSILE STRENGTH	YIELD STRENGTH	ELONGATION	BRINELL HARDNESS
		(Mpa)	(Mpa)	(%)	(HBW)
SAND CASTING	F	140	70	3	50
	T6	240	180	3	85
SHELL CASTING	T	170	70	5	50
	T6	260	180	5	85

#### PHYSICAL PROPERTIES - EN 1706:2020

DENSITY	2,79 Kg/dm <sup>3</sup>	SOLIDIFICATION AND MELTING RANGES	550-635°C
FATIGUE RESISTANCE	80-110 MPA	OPTIMUM RANGE OF SAND CASTING	680-720°C
ELECTRIC CONDUCTIVITY	19-25 MS/m	OPTIMUM RANGE OF SHELL CASTING	680-720°C
THERMAL CONDUCTIVITY	140-160 W/(m K)	THERMAL EXPANSION (from 20°C to 100°C)	23·10 <sup>-6</sup> /K

#### TECHNOLOGICAL PROPERTIES - EN 1706:2020

CASTABILITY	MEDIUM	RESISTANCE TO HOT TEARING	MEDIUM
WELDABILITY	GOOD	STRENGTH AT ELEVATED TEMPERATURE	-
POLISHING	GOOD	PRESSURE TIGHTNESS	MEDIUM
MACHINABILITY	MEDIUM	DECORATIVE ANODIZING	GOOD
CORROSION RESISTANCE	GOOD	PROTECTIVE ANODIZING	-

#### APPLICATIONS

Employed in the chemical and furniture industry. Alloy appropriate to create castings that are corrosion resistant and are suitable for processes, such as anodic oxidation and welding. Alloy compliant with Food standard EN 601

#### HEAT TREATMENTS

		SOLUBILISATION TEMPERATURE	SOLUBILISATION DURATION	WATER HARDENING TEMPERATURE	AGEING TEMPERATURE	AGEING DURATION
F	RAW STATE	-	-	-	-	-
O	ANNEALING	520-530 °C	6-8 hours	20 °C	-	-
T1	SELF-HARDENING	-	-	-	-	-
T4	SOLUBILISATION AND NATURAL AGEING	480-530 °C	2-16 hours	20-80 °C	15-30 °C	120 hours
T5	CONTROLLED COOLING AND ARTIFICIAL AGEING	-	-	AIR	210-230 °C	5-12 hours
T6	SOLUBILISATION AND ARTIFICIAL AGEING	480-555 °C	2-20 hours	20-80 °C	130-185 °C	2-15 hours
T64	SOLUBILISATION AND PARTIAL AGEING	520-545 °C	4-10 hours	20-50 °C	135-160 °C	2-7 hours
T7	HYPERAGEING	480-530 °C	1-8 hours	20 °C	190-240 °C	1-8 hours

The temperatures and the duration of the treatments vary according to the type of alloy, melting (shell, sand or die casting) and the result you want to obtain.

Ideal parameters shall be determined by a test.

#### EQUIVALENTS OR SIMILARS FOREIGN REGULATIONS

	ITALY	GERMANY	FRANCE	G.B.R.	USA	ISO	JAPAN	TURKEY
	UNI	Din1725/5-86	NFA57-105	BS1490-88	ASTM 179-82	3522-84	JIS H2211-92	ETIAL
Equivalents								
Similar								

What is indicated in this data sheet is limited to inform only and does not imply any guarantee regarding the properties reported.

Everything that involves decisions based on the information stated here is direct responsibility of the end user, as well as any risks, not excluded from the verification.

Any liability on the part of the issuer of this document shall lapse if there is no verification.