



### Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 10 Mg**

Alloy designation: **EN AB and AC 43500 Al Si 10 Mn Mg**

Replaces: **AlSi10MgMn**

#### CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 43500	min	9,0			0,40	0,15								
	max	11,5	0,20	0,03	0,80	0,60	-	-	0,07	-	-	0,15	0,05	0,15
AlSi10MgMn	min	9,5			0,50	0,10								
	max	11,5	0,15	0,03	0,8	0,50	-	-	0,10	-	-	0,15	SR	0,03

#### MECHANICAL FEATURES DETECTED FROM SEPARATE CASTING TEST SPECIMENS

Casting process	Temper designations	Rm Tensile strenght		Sp 0,2 Yield strenght		A Elongation		HB Brinell hardness	
		EN 1706	AlSi10MgMn	EN 1706	AlSi10MgMn	EN 1706	AlSi10MgMn	EN 1706	AlSi10MgMn
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
	F	250	250 - 290	120	120 - 150	5	5 - 10	65	75 - 100
PRESSURE DIE (as cast)	T5	270	260 - 330	150	150 - 240	4	3 - 10	80	90 - 115
The values indicated are obtained by modifying the Magnesium content in the alloy	T6		290 - 350		200 - 280		6 - 12		100 - 115
	T4		210 - 260		95 - 140		15 - 22		60 - 75
	T7	200	200 - 240	120	120 - 170	12	15 - 20	60	60 - 75

#### PHYSICAL PROPERTIES (indicative values subject to the UNI EN Standards)

DENSITY	2.64 Kg/dm <sup>3</sup>	THERMAL CONDUCTIVITY at 20°C	140 - 170 W/(m K)
MELTING RANGE or MELTING POINT	550 °C	LINEAR THERMAL EXPANSION from 20 t 100°C	-
	590 °C	LINEAR THERMAL EXPANSION from 20 t 200°C	21.0-10-6/°C
SPECIFIC HEAT (at 100°)		LINEAR THERMAL EXPANSION from 20 t 300°C	-
LINEAR SHRINKAGE IN SAND PROCESS		SUGGESTED MAXIMUM TEMPERATURE	780 °C
LINEAR SHRINKAGE IN HIGH PRESSURE	0.4 - 0.6 %	SUGGESTED CASTING TEMPERATURE	
ELECTRIC CONDUCTIVITY	19 - 25 MS/m	°in sand	
MODULUS OF ELASTICITY	70 - 80 Gpa	°in shell	
		°in pressure die	650 - 730 °C

#### TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

STRENGTH AT ELEVATED TEMPERATURE(to 200°C)	CORRECT	RESISTANCE TO HOT TEARING	EXCELLENT
GENERAL RESISTANCE TO CORROSION	GOOD	PRESSURE TIGHTNESS	CORRECT
MACHINABILITY	GOOD	WELDABILITY	EXCELLENT
CASTABILITY	EXCELLENT	DECORATIVE ANODISING	OT RECOMMENDE
POLISHING	MEDIOCRE	PROTECTIVE ANODISING	OT RECOMMENDE

**Address:** Veliköy Sanayi Bölgesi 1. Kısım Osman Uzun Cad. No: 2/1 Çerkezköy / Tekirdağ / TURKEY  
**Email:** info@bayrammetal.com.tr - **Phone:** +90 282 746 10 41 (Pbx) - **Web:** bayrammetal.com.tr