



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 5 Cu**

Alloy designation: **EN AB and AC 45200 Al Si 5 Cu 3 Mn**

Alloy group: **Al Si 5 Cu**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 45200	min	4,5		2,50	0,20									
	max	6,0	0,70	4,00	0,55	0,40	-	0,30	0,55	0,20	0,10	0,15	0,05	0,25
LM 4	min	4,0		2,00	0,20									
	max	6,0	0,80	4,00	0,60	0,20	-	0,30	0,50	0,10	0,10	0,20	0,05	0,15

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	BS 1490:88	EN 1706	BS 1490:88	EN 1706	BS 1490:88	EN 1706	BS 1490:88
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast) Hardened and Aged artif.	F	140	140 - 170	70	70 - 110	1	2 - 3	60	65 - 80
	T6	230	230 - 290	200	200 - 300	1	0 - 2	90	90 - 120
SHELL (as cast) Hardened and Aged artif.	F	160	160 - 220	80	80 - 110	1	2 - 4	70	70 - 90
	T6	280	280 - 370	230	200 - 300	1	1 - 5	90	90 - 120
PRESSURE DIE (as cast)									

PHYSICAL PROPERTIES (indicative values subject to the UNI EN and ex BS 1490I Standards)

DENSITY	2.75 Kg/dm ³
MELTING RANGE or MELTING POINT	520 °C 620 °C
SPECIFIC HEAT (at 100°)	0.91 J/Gk
LATENT HEAT OF MELTING	
LINEAR SHRINKAGE IN SHELL PROCESS	~1.30 %
ELECTRIC CONDUCTIVITY	15 - 19 MS/m
MODULUS OF ELASTICITY	7200 Kg/mm ²

THERMAL CONDUCTIVITY at 20°C	120 - 130 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100°C	-
LINEAR THERMAL EXPANSION from 20 t 200°C	22.0-10-6/°C
LINEAR THERMAL EXPANSION from 20 t 300°C	-
SUGGESTED MAXIMUM TEMPERATURE	780 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	-
°in shell	670 - 740 °C
°in pressure die	-

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

STRENGTH AT ELEVATED TEMPERATURE(to 200°C)	EXCELLENT
GENERAL RESISTANCE TO CORROSION	MEDIUM
MACHINABILITY	GOOD
CASTABILITY	GOOD
POLISHING	GOOD

RESISTANCE TO HOT TEARING	SMALL
PRESSURE TIGHTNESS	GOOD
WELDABILITY	LOW
DECORATIVE ANODISING	MEDIUM
PROTECTIVE ANODISING	

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