BAYRAM METAL

Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 10 Mg**

Alloy designation: **EN AB and AC 43200 Al Si 10 Mg (Cu)**

Replaces: **DIN 233**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	**Fe**	**Cu**	**Mn**	**Mg**	**Cr**	**Ni**	**Zn**	**Pb**	**Sn**	**Ti**	Individual impurities	Global impurities
EN AB 43200	min	9,0				0,25								
	max	11,0	0,55	0,30	0,55	0,45	-	0,15	0,35	0,10	-	0,15	0,05	0,15
DIN 233	min	9,0			0,1	0,20								
	max	11,0	0,60	0,3	0,4	0,50	-	0,15	0,35	0,05	-	0,15	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	DIN 1725	EN 1706	DIN 1725	EN 1706	DIN 1725	EN 1706	DIN 1725
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast)	F	160	170 - 230	80	90 - 110	1	1 - 4	50	50 - 70
Hardened and Aged artif.	T6	220	220 - 320	180	180 - 260	1	1 - 3	75	80 - 110
SHELL (as cast)	F	180	200 - 260	90	100 - 140	1	1 - 3	55	65 - 85
Hardened and Aged artif.	T6	240	240 - 320	200	210 - 280	1	1 - 3	80	85 - 115
PRESSURE DIE (as cast)	Gd								

PHYSICAL PROPERTIES (indicative values subject to the UNI EN and ex DIN Standards)

DENSITY	2.69 Kg/dm³
MELTING RANGE or MELTING POINT	530 °C 600 °C
SPECIFIC HEAT (at 100)°	0.90 J/Gk
LINEAR SHRINKAGE IN SAND PROCESS	1.0 - 1.2 %
LINEAR SHRINKAGE IN SHELL PROCESS	0.5 - 0.8 %
ELECTRIC CONDUCTIVITY	16 - 24 MS/m
MODULUS OF ELASTICITY	7400 Kg/mm²

THERMAL CONDUCTIVITY at 20°C	130 - 170 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	680 - 750 °C
°in shell	680 - 730 °C
°in pressure die	-

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

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