BAYRAM METAL

Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 5 Cu**

Alloy designation: **EN AB and AC 45400 - Al Si 5 Cu 3**

Replaces:

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 45400	min	4,5		2,6										
	max	6,0	0,50	3,6	0,55	0,05	-	0,10	0,20	0,10	0,05	0,20	0,05	0,15
No UNI name	min													
	max													

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		EN 1706		EN 1706		EN 1706	
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast)									
SHELL (as cast)									
	T 4	230	245 - 250	110	110 - 120	6	6 - 8	75	70 - 80
PRESSURE DIE (as cast)									

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

DENSITY	2.77 Kg/dm³
MELTING RANGE or MELTING POINT	520 °C 620 °C
SPECIFIC HEAT (at 100)°	0.91 J/Gk
LINEAR SHRINKAGE IN SAND PROCESS	
LINEAR SHRINKAGE IN SHELL PROCESS	~1.30 %
LINEAR SHRINKAGE IN HIGH PRESSURE	
ELECTRIC CONDUCTIVITY	16 - 19 MS/m
MODULUS OF ELASTICITY	7200 Kg/mm²

THERMAL CONDUCTIVITY at 20°C	
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	

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