



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si Cu Ni Mg**

Alloy designation: **EN AB and AC 48100 - Al Si 17 Cu 4 Mg**

Replaces:

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS											Individual impurities	Global impurities	
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti			
EN AB48100	min	16,0		4,00		0,45									
	max	18,0	1,00	5,00	0,50	0,65	-	0,30	1,50	-	0,30	-	0,05	0,25	
	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	N/mm2	EN 1706	N/mm2	EN 1706	%	EN 1706	HB
		Mpa		Mpa		%		HBW	
SAND (as cast)									
Annealed									
SHELL (as cast)									
Annealed									
PRESSURE DIE (as cast)	F	220	-	160	-	1		90	

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

DENSITY	2.73 Kg/dm ³	THERMAL CONDUCTIVITY at 20°C	140 - 190 W/(m K)
MELTING RANGE or MELTING POINT	510 °C	LINEAR THERMAL EXPANSION from 20 t 100°C	-
	640 °C	LINEAR THERMAL EXPANSION from 20 t 200°C	18.0-10-6/°C
SPECIFIC HEAT (at 100°)	0.90 J/Gk	LINEAR THERMAL EXPANSION from 20 t 300°C	-
LINEAR SHRINKAGE IN SAND PROCESS		SUGGESTED MAXIMUM TEMPERATURE	780 °C
LINEAR SHRINKAGE IN SHELL PROCESS		SUGGESTED CASTING TEMPERATURE	
LINEAR SHRINKAGE IN HIGH PRESSURE	0.3 - 0.5%	°in sand	
ELECTRIC CONDUCTIVITY	24 MS/m	°in shell	
MODULUS OF ELASTICITY	8000 Kg/mm ²	°in pressure die	680 - 740 °C

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

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