



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

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

Alloy designation: **EN AB and AC 48000 - Al Si 12 Cu Ni Mg**

Replaces: **DIN 260**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												Individual impurities	Global impurities
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti			
EN AB48000	min	10,5		0,8		0,9		0,7							
	max	13,5	0,6	1,5	0,35	1,5	-	1,3	0,35	-	-	0,20	0,05	0,15	
DIN 260	min	11,0		0,80		0,9		0,7							
	max	13,0	0,60	1,50	0,35	1,5	-	1,3	0,35	-	-	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	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	-		-					
	T6	-	200 - 230	-	180 - 200		0,2 - 0,5		90 - 110
SHELL (as cast)	F	-		-					
	T5	200		185		1		90	
	T6	280	200 - 250	240	190 - 230	1	0,3 - 0,8	100	90 - 125
PRESSURE DIE (as cast)	F	-	250 - 310	-	200 - 280		1	-	100 - 120

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

DENSITY	2,68 Kg/dm ³
MELTING RANGE or MELTING POINT	540 °C 585 °C
SPECIFIC HEAT (at 100)°	0,90 J/gK
LINEAR SHRINKAGE IN SAND PROCESS	1,0 - 1,2 %
LINEAR SHRINKAGE IN SHELL PROCESS	0,7 - 1,0 %
LINEAR SHRINKAGE IN HIGH PRESSURE	0,4 - 0,6 %
ELECTRIC CONDUCTIVITY	15 - 23 MS/m
MODULUS OF ELASTICITY	7500 Kg/mm ²

THERMAL CONDUCTIVITY at 20°C	130 - 160 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100	-
LINEAR THERMAL EXPANSION from 20 t 200	21.0-10-6/°C
LINEAR THERMAL EXPANSION from 20 t 300	-
SUGGESTED MAXIMUM TEMPERATURE	780 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	670 - 740 °C
°in shell	670 - 740 °C
°in pressure die	620 - 660 °C

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

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

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