



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Cu**

Alloy designation: **EN AB and AC 21200 Al Cu 4 Mn Mg**

Replaces:

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS											Individual impurities	Global impurities
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti		
EN AB 21100	min			4,00	0,20	0,20								
	max	0,1	0,15	5,00	0,50	0,50	-	0,03	0,05	0,03	0,03	0,05	0,03	0,10
	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	HB
SAND (as cast) cooling from casting and aging	T4	330		225			3		
SHELL (as cast) cooling from casting and aging	T4	400		240			8		
	T7	410		325			5		
PRESSURE DIE (as cast)									

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

DENSITY	2.79 Kg/dm ³
MELTING RANGE or MELTING POINT	540 °C 650 °C
SPECIFIC HEAT (at 100)°	0.91 J/Gk
LINEAR SHRINKAGE IN SAND PROCESS	1.1 - 1.5 %
LINEAR SHRINKAGE IN SHELL PROCESS	0.9 - 1.2 %
ELECTRIC CONDUCTIVITY	16 - 23 MS/m
MODULUS OF ELASTICITY	7200 Kg/mm ²

THERMAL CONDUCTIVITY at 20°C	120 - 150 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100°C	
LINEAR THERMAL EXPANSION from 20 t 200°C	23.0-10-6°C
LINEAR THERMAL EXPANSION from 20 t 300°C	
SUGGESTED MAXIMUM TEMPERATURE	750 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	700 - 750 °C
°in shell	700 - 730 °C
°in pressure die	

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

RESISTANCE TO HOT TEARING	MEDIUM
PRESSURE TIGHTNESS	MEDIUM
WELDABILITY	CORRECT
DECORATIVE ANODISING	CORRECT
PROTECTIVE ANODISING	CORRECT

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