



### Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Mg**

Alloy designation: **EN AB and AC 51200 - Al Mg 9**

Replaces: **DIN 349**

#### CHEMICAL COMPOSITION %

ALLOY		ELEMENTS											Individual impurities	Global impurities
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti		
EN AB 51200 - Al Mg 9	min		0,45			8,5								
	max	2,5	0,9	0,08	0,55	10,5	-	0,10	0,25	0,10	0,10	0,15	0,05	0,15
	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	DIN1725	EN 1706	DIN1725	EN 1706	DIN1725	EN 1706	DIN1725
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast) Annealed									
SHELL (as cast) Annealed									
PRESSURE DIE (as cast)	F	200	200 - 300	130	140 - 220	1	1 - 5	70	70 - 100

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

DENSITY	2.63 Kg/dm <sup>3</sup>
MELTING RANGE or MELTING POINT	520 °C 620 °C
SPECIFIC HEAT (at 100)°	0.94 J/Gk
LINEAR SHRINKAGE IN SAND PROCESS	
LINEAR SHRINKAGE IN SHELL PROCESS	
LINEAR SHRINKAGE IN HIGH PRESSURE	0.5 - 0.8 %
ELECTRIC CONDUCTIVITY	11 - 14 MS/m
MODULUS OF ELASTICITY	6800 Kg/mm <sup>2</sup>

THERMAL CONDUCTIVITY at 20°C	60 - 90 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100°C	-
LINEAR THERMAL EXPANSION from 20 t 200°C	25.0-10-6/°C
LINEAR THERMAL EXPANSION from 20 t 300°C	-
SUGGESTED MAXIMUM TEMPERATURE	740 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	
°in shell	
°in pressure die	640 - 680 °C

#### TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

RESISTANCE TO HOT TEARING	MEDIUM
PRESSURE TIGHTNESS	MEDIUM
WELDABILITY	INSUFFICIENT
DECORATIVE ANODISING	GOOD
PROTECTIVE ANODISING	

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