



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Mg**

Alloy designation: **EN AB and AC 51300 - Al Mg 5**

Replaces: **UNI 3058 G Al Mg 5**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 51300	min					4,8								
	max	0,35	0,45	0,05	0,45	6,5	-	-	0,10	-	-	0,15	0,05	0,15
UNI 3058	min				0,20	4,50								
	max	0,3	0,4	0,05	0,5	5,50	-	0,01	0,10			0,20		0,2*

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	UNI 3058	EN 1706	UNI 3058	EN 1706	UNI 3058	EN 1706	UNI 3058
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast)	F	160	155-185	90	80-110	3	3 - 7	55	55 - 70
SHELL (as cast)	F	180	195-225	100	90-120	4	8 - 12	60	60 - 80
PRESSURE DIE (as cast)	Gd								

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

DENSITY	2.65 Kg/dm ³
MELTING RANGE or MELTING POINT	560 °C 630 °C
SPECIFIC HEAT (at 100)°	0.23 cal/g °C
LATENT HEAT OF MELTING	93 cal/g
LINEAR SHRINKAGE	~1.30 %
ELECTRIC CONDUCTIVITY	15 - 21 MS/m
MODULUS OF ELASTICITY	6900 Kg/mm ²

THERMAL CONDUCTIVITY at 20°C	110 - 130 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100°C	24.0x10-6/°C
LINEAR THERMAL EXPANSION from 20 t 200°C	24.5x10-6/°C
LINEAR THERMAL EXPANSION from 20 t 300°C	25.0x10-6/°C
SUGGESTED MAXIMUM TEMPERATURE	780 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	720-750 °C
°in shell	720-750 °C
°in pressure die	

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

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