



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 9 Cu**

Alloy designation: **EN AB and AC 46600 - Al Si 7 Cu 2**

Replaces: **LM 27**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 46600	min	6,0		1,5	0,15									
	max	8,0	0,7	2,5	0,65	0,35	-	0,35	1,0	0,25	0,15	0,20	0,05	0,15
LM 27	min	6,0		1,50	0,20									
	max	8,0	0,80	2,50	0,65	0,35	-	0,35	1,00	0,25	0,15	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	BS 1490:88	EN 1706	BS 1490:88	EN 1706	BS 1490:88	EN 1706	BS 1490:88
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast)	F	150	140	90	80 - 90	1	1	60	70 - 85
		-	-	-	-	-	-	-	-
SHELL (as cast)	F	170	160	100	90 - 110	1	2	75	75 - 90
		-	-	-	-	-	-	-	-
PRESSURE DIE (as cast)		-	-	-	-	-	-	-	-

PHYSICAL PROPERTIES (indicative values subject to the UNI EN and BS 1490:88 Standards)

DENSITY	2.75 Kg/dm ³
MELTING RANGE or MELTING POINT	525 °C 605 °C
SPECIFIC HEAT (at 100)°	
LINEAR SHRINKAGE IN SAND PROCESS	1.30%
LINEAR SHRINKAGE IN SHELL PROCESS	1.30%
LINEAR SHRINKAGE IN HIGH PRESSURE	
ELECTRIC CONDUCTIVITY	15 - 19 MS/m
MODULUS OF ELASTICITY	7200 Kg/mm ²

THERMAL CONDUCTIVITY at 20°C	120 - 130 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	780 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	660 - 740 °C
°in shell	660 - 740 °C
°in pressure die	-

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

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

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