



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 5 Cu**

Alloy designation: **EN AB and AC 45000 - Al Si 6 Cu 4**

Replaces: **UNI 7369/4 SG Al Cu 3°**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 45000	min	5,0		3,0	0,20									
	max	7,0	0,9	5,0	0,65	0,55	0,15	0,45	2,0	0,30	0,15	0,20	0,05	0,35
UNI 7369/4 - SG Al Cu 3°	min	5,0		3,00										
	max	7,0	1,0	5,00	0,5	0,30	-	0,30	2,00	0,20	0,15	0,15		3,3*

*Exc. Fe+Ti

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 7369/4	EN 1706	UNI 7369/4	EN 1706	UNI 7369/4	EN 1706	UNI 7369/4
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast)	F	150	155-195	90		1	0,5-1,5	60	60 - 95
SHELL (as cast)	F	170	195-235	100	130-155	1	1-2	75	75 - 105
PRESSURE DIE (as cast)									

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

DENSITY	2.9 Kg/dm ³
MELTING RANGE or MELTING POINT	510 °C 620 °C
SPECIFIC HEAT (at 100)°	0.23 cal/g °C
LATENT HEAT OF MELTING	93 cal/g
LINEAR SHRINKAGE	~1.20 %
ELECTRIC CONDUCTIVITY	14 - 17 MS/m
MODULUS OF ELASTICITY	7200 Kg/mm ²

THERMAL CONDUCTIVITY at 20°C	110 - 120 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100°C	
LINEAR THERMAL EXPANSION from 20 t 200°C	25x10-6/°C
LINEAR THERMAL EXPANSION from 20 t 300°C	
SUGGESTED MAXIMUM TEMPERATURE	800 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	660-740 °C
°in shell	700-740 °C
°in pressure die	

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

RESISTANCE TO HOT TEARING	MEDIUM
PRESSURE TIGHTNESS	SUFFICIENT
WELDABILITY	GOOD
DECORATIVE ANODISING	BAD
SUITABILITY FOR PROTECTIVE ANODISING	BAD

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