



RAFFMETAL

THE ALUMINIUM EVOLUTION



Leghe di alluminio in colata continua. Continuous casting aluminium alloys

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 9 Cu**

Alloy designation: **EN AB and AC 46100 - Al Si 11 Cu 2 (Fe)**

Replaces: **UNI 7363 - SG Al Si 132**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 46100	min	10,0	0,45	1,5										
	max	12,0	1,0	2,5	0,55	0,30	0,15	0,45	1,7	0,25	0,15	0,20	0,05	0,25
UNI 7363 - SG Al Si 132	min	11,0	0,70	1,75										
	max	12,5	1,0	2,50	0,5	0,30	-	0,30	1,40	0,15	0,10	0,20		2,20

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 7363	EN 1706	UNI 7363	EN 1706	UNI 7363	EN 1706	UNI 7363
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
SAND (as cast)									
Annealed									
SHELL (as cast)									
Annealed									
PRESSURE DIE (as cast)	F	240	265-295	140	155-195	1	1,5-2,5	80	85-100

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

DENSITY	2.67 Kg/dm ³	THERMAL CONDUCTIVITY at 20°C	120 - 130 W/(m K)
MELTING RANGE or MELTING POINT	565 °C 585 °C	LINEAR THERMAL EXPANSION from 20 t 100°C	19.7x10 ⁻⁶ /°C
SPECIFIC HEAT (at 100)°	0.23 cal/g °C	LINEAR THERMAL EXPANSION from 20 t 200°C	20.5x10 ⁻⁶ /°C
LATENT HEAT OF MELTING	93 cal/g	LINEAR THERMAL EXPANSION from 20 t 300°C	21.3x10 ⁻⁶ /°C
LINEAR SHRINKAGE	~0.7 %	SUGGESTED MAXIMUM TEMPERATURE	750 °C
ELECTRIC CONDUCTIVITY	14 - 18 MS/m	SUGGESTED CASTING TEMPERATURE	
MODULUS OF ELASTICITY	7600 Kg/mm ²	°in sand	
		°in shell	
		°in pressure die	600-700 °C

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

STRENGTH AT ELEVATED TEMPERATURE(to 200°C)	MEDIUM	RESISTANCE TO HOT TEARING	SMALL
GENERAL RESISTANCE TO CORROSION	MEDIUM	PRESSURE TIGHTNESS	SUFFICIENT
MACHINABILITY	SUFFICIENT	WELDABILITY	SUFFICIENT
CASTABILITY	GOOD	DECORATIVE ANODISING	LOW
POLISHING	MEDIUM	PROTECTIVE ANODISING	

AZIENDA CON SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO DA DNV = UNI EN ISO 9001:2008 =

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AZIENDA CON SISTEMA DI GESTIONE AMBIENTALE CERTIFICATO DA DNV = UNI EN ISO 14001:2004 =