



### Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 5 Cu**

Alloy designation: **EN AB and AC 45500 - Al Si 7 Cu 0.5 Mg**

Replaces:

#### CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
<b>EN AB 46000</b>	min	6,5		0,2		0,25								
	max	7,5	0,25	0,7	0,15	0,45			0,07			0,20	0,03	0,10
<b>DIN 226 D</b>	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	DIN 1725	EN 1706	DIN 1725	EN 1706	DIN 1725	EN 1706	DIN 1725
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
<b>SAND</b> (as cast) Annealed	<b>T6</b>	<b>250</b>		<b>190</b>		<b>1</b>		<b>85</b>	
<b>SHELL</b> (as cast) Annealed	<b>T6</b>	<b>320</b>		<b>240</b>		<b>4</b>		<b>100</b>	
<b>PRESSURE DIE</b> (as cast)									

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

DENSITY	<b>2.66 Kg/dm<sup>3</sup></b>
MELTING RANGE or MELTING POINT	<b>550 °C</b> <b>625 °C</b>
SPECIFIC HEAT (at 100)°	<b>0.92 J/Gk</b>
LINEAR SHRINKAGE IN SAND PROCESS	<b>1.1 - 1.2 %</b>
LINEAR SHRINKAGE IN SHELL PROCESS	<b>0.8 - 1.1 %</b>
LINEAR SHRINKAGE IN HIGH PRESSURE	
ELECTRIC CONDUCTIVITY	<b>16 - 22 MS/m</b>
MODULUS OF ELASTICITY	<b>7400 Kg/mm<sup>2</sup></b>

THERMAL CONDUCTIVITY at 20°C	<b>150 - 165 W/(m K)</b>
LINEAR THERMAL EXPANSION from 20 t 100°C	
LINEAR THERMAL EXPANSION from 20 t 200°C	<b>22.0-10-6/°C</b>
LINEAR THERMAL EXPANSION from 20 t 300°C	
SUGGESTED MAXIMUM TEMPERATURE	<b>780°C</b>
SUGGESTED CASTING TEMPERATURE	
°in sand	<b>680 - 750 °C</b>
°in shell	<b>680 - 750 °C</b>
°in pressure die	

#### TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

STRENGTH AT ELEVATED TEMPERATURE(to 200°C)	<b>GOOD</b>
GENERAL RESISTANCE TO CORROSION	<b>GOOD</b>
MACHINABILITY	<b>GOOD</b>
CASTABILITY	<b>GOOD</b>
POLISHING	<b>MEDIUM</b>

RESISTANCE TO HOT TEARING	<b>GOOD</b>
PRESSURE TIGHTNESS	<b>GOOD</b>
WELDABILITY	<b>GOOD</b>
DECORATIVE ANODISING	<b>NOT RECOMMEND</b>
PROTECTIVE ANODISING	<b>NOT RECOMMEND</b>

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