BAYRAM METAL



Continuous casting aluminium alloys.

Standard: **UNI EN 1676 and 1706**

Alloy group: **Al Si 10 Mg**

Alloy designation: **EN AB and AC 43400 Al Si 10 Mg (Fe)**

Replaces: **DIN 239 D - GD Al Si 10 Mg**

CHEMICAL COMPOSITION %

ALLOY		ELEMENTS												
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Individual impurities	Global impurities
EN AB 43400	min	9,0	0,45			0,25								
	max	11,0	0,9	0,08	0,55	0,50	-	0,15	0,15	0,15	0,05	0,15	0,05	0,15
DIN 239 D - GD Al Si 10 Mg	min	9,0				0,20								
	max	11,0	1,00	0,10	0,4	0,50	-	0,05	0,15	0,05	0,05	0,15	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	
		Mpa	N/mm2	Mpa	N/mm2	%	%	HBW	HB
IN SAND									
IN SHELL									
PRESSURISED (Raw)	F	240	220 - 300	140	140 - 200	1	1 - 3	70	70 - 100

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

DENSITY	2.68 Kg/dm³
MELTING RANGE or MELTING POINT	550 °C 600 °C
SPECIFIC HEAT (at 100)°	0.91 J/Gk
LINEAR SHRINKAGE IN SAND PROCESS	
LINEAR SHRINKAGE IN HIGH PRESSURE	0.4 - 0.6
ELECTRIC CONDUCTIVITY	16 - 21 MS/m
MODULUS OF ELASTICITY	7400 Kg/mm²

THERMAL CONDUCTIVITY at 20°C	130 - 150 W/(m K)
LINEAR THERMAL EXPANSION from 20 t 100°C	21 10-6/°K
LINEAR THERMAL EXPANSION from 20 t 200°C	22.0-10-6/K
LINEAR THERMAL EXPANSION from 20 t 300°C	-
SUGGESTED MAXIMUM TEMPERATURE	750 °C
SUGGESTED CASTING TEMPERATURE	
°in sand	-
°in shell	-
°in pressure die	630 - 700

TECHNOLOGICAL FEATURES, QUALITATIVE INDICATIONS

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

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