ROLEC Gehäuse-Systeme GmbH

Technical data for die cast aluminium series aluNORM

Chemical composition and mechanical characteristics according to DIN EN 1706

Designation of the die cast aluminium alloy		
Group of alloys:	ALSi	
Structural material symbol:	GD-ALSi12 (DIN 1725)	EN AC-44300 (DIN EN 1706)

Chemical composition of mass proportions in %		
Silicium	(Si)	10,5 – 13,5
Iron, pure	(Fe)	1,0 (0,45 – 0,9)
Copper	(Cu)	0,1 (0,08)
Manganese	(Mn)	0,55
Magnesium	(Mg)	--
Chromium	(Cr)	--
Nickel	(Ni)	--
Zinc	(Zn)	0,15
Lead	(Pb)	--
Tin	(Sn)	--
Titanium	(Ti)	0,15
Further additions		0,25
Aluminium	(Al)	Rest

Mechanical characteristics			
Tensile strength	R_m	Mpa min.	240
Permanent elongation limit	$R_{p0,2}$	Mpa min.	130
Breaking elongation	A_{50mm}	% min.	1
Brinell hardness	HBS	min.	60
Solidity at ambient temperature			good
Solidity till 200 °C			acceptable
Impact strength (ductility)			acceptable
Fatigue resistance	Mpa[9] -	Mpa[10]	60 – 90

Further characteristics			
Thermal conductivity	W/(m · K)		130 - 160
Electric conductivity	MS/m		16 - 22
Longitudinal elongation coefficient	10^{-6}/K	293K – 373K	20

Enclosures for die cast aluminium				
AS060	AS062	AS064	AS066	AS/AF/AD 080
AS/AF/AD 082	AS/AF/AD 084	AS/AF/AD/AH 100	AS/AF/AD/AH 102	AS/AF/AD/AH 104
AS/AF/AD/AH 120	AS/AF/AD/AH 122	AS/AF/AD/AH 124	AS/AF/AD/AH 160	AS/AF/AD/AH 162
AS/AF/AD/AH 164	AS/AF/AD/AH 200	AS/AF/AD/AH 202	AS/AF/AD/AH 204	AS/AF/AD 320