

Chemical Composition

%	Si	Fe	Cu	Mn	Mg	Zn	Ti	Other Elements		Al
								Each	Total	
min.	0.90	0.15	-	0.40	0.60	-	-	-	-	Balance
max.	1.10	0.23	0.03	0.60	0.90	0.02	0.02	0.02	0.10	

Forms of Products

Industrial Profiles, Trailer Profiles, Profiles for Automotive, Sigma Profiles

Strength

Temper (AA)	Yield strength (MPa)	Tensile (MPa)	Elongation (%)	Hardness Brinell
T4	125	225	20	65
T6 *	290	315	10	100

* Aged for 5 hours at 185°C.

Special Properties

Formability.....: Good
 Machinability.....: Good
 Weldability.....: Good, particularly for arc welding (MIG, TIG)
 Corrosion resistance.....: Good against attack by atmosphere, fresh water and several types of earth. Can be used in industrial and seacoast atmospheres without protection.
 Surface treatment.....: Responds well to polishing
 Anodizing.....: Less suitable, but is anodized for surface protection

Physical Properties - Typical Values

Density.....: 2.71 kg/dm ³	Specific heat capacity...: 0-100 °C 897 J/(kg•k)
Modulus of elasticity.....: 69 kN/mm ²	Resistivity.....: 20 °C 38 nΩ•m
Shear modulus.....: 25 kN/mm ²	Conductivity.....: 20 °C 46 % IACS
Linear expansion coefficient...: 20-100 °C 23 μ°C ⁻¹	Melting range.....: 580-650 °C
Thermal conductivity.....: 20 °C 180 W/(m•K)	

k=kilo, μ =micro(10⁻⁶), n=nano(10⁻⁹)

Application

Typical examples for use of this alloy are:

- Road and rail transport
- Scaffolding
- Bridges
- Cranes and heavy structures
- Automotive

Corresponding or Closely Approximating Norms and Designation

Norway NS	Sweden SIS	France NF	Germany DIN	UK BS	USA AA	ISO	Italy UNI
17305	4212	6082	AlMgSi0.5 F31	6082	6082	Al-SiMgMn	9006-4