Datasheet:

EN AW-7020
Sheet, strip & plate - Aluminium

Alumeco ApS
08-04-2025

Internal alloy name:	**7020**
Chemical Symbol:	**EN AW-Al Zn4,5Mg1**
International alloy name:	**EN AW-7020**
UNS:	**A97005**
DIN-Werkstoff no.:	**3.4335**
Alloy type:	**Heat treatable alloy**

Main usage:

- Welded structural components – Containers, truck components, pylons, bridges
- Military application

Main properties:

- High strength weldable alloy
- High fatigue strength
- High strength in welded structures

Important norms and literature:

General Standards:
EN 573-3:2013: Aluminium and aluminium alloys – Chemical composistion and form of wrought products – Part 3: Chemical composition and form of products.

Product standards:
EN 485-2:2008: Aluminium and aluminium alloys – Sheet, strip and plate – Part 2: Mechanical properties.

Geometric Tolerance:
EN 485-3:2005: Aluminium and aluminium alloys – Sheet, strip and plate – Part 3: Tolerances on dimensions and form for hot-rolled products

EN 485-4:2000: Aluminium and aluminium alloys – Sheet, strip and plate – Part 4: Tolerances on shape and dimensions for cold-rolled products

Chemical composition in %: EN 573-3:2013

Al	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Max. Each	Others Max. Total
Remainder	Max. 0,35	Max. 0,40	Max. 0,2	0,05 – 0,50	1,0 – 1,4	0,10 – 0,35	4,0 – 5,0	-	0,05	0,15

Mechanical properties: EN 485-2:2008

Temper	Specified thickness *t* mm	Tensile Stress R_m MPa	Proof Stress $R_{p0,2}$ MPa	Elongation Min. % A_{50mm}	Elongation Min. % A	Bend radius* 90° *t* mm	Bend radius* 90° bend	Hardness HBW
O	0,4 ≤ *t* < 12,5	Max. 220	Max. 140	12 - 15	-	-	-	45
T4	0,4 ≤ *t* < 12,5	Min. 320	Min. 210	11 - 14	-	0,4 - 12,5	2,0 - 5,0 * t	92
T451	0,4 ≤ *t* < 12,5	Min. 320	Min. 210	11 - 14	-	0,4 - 12,5	2,0 - 5,0 * t	92
T6	0,4 ≤ *t* < 250	Min. 330 - 350	Min. 260 - 280	7 - 10	5 - 9	0,4 - 12,5	3,5 - 8,0 * t	98 - 104
T651	0,4 ≤ *t* < 250	Min. 330 - 350	Min. 260 - 280	7 - 10	5 - 9	0,4 - 12,5	3,5 - 8,0 * t	98 - 104
T62	0,4 ≤ *t* < 250	Min. 330 - 350	Min. 260 - 280	7 - 10	5 - 9	0,4 - 12,5	3,5 - 8,0 * t	98 - 104

*** Information values only;**

Physical properties:

Density g/cm³	Solidification range °C	Electrical conductivity %IACS	Thermal conductivity W/m K	Thermal expansion (µm m^{-1} K^{-1})	Annealing temperature °C	E - modulus (N / mm²)
2,78	605 – 645	35	140	23,3	400 – 420	70000

Properties and information's (3 high/good; 2 Middle; 1 Poor/bad)

Resistance:
Corrosion index, general: 2
Marine Atm. Corr index: 1

Hot workability:
Extrusion: 2
Forging: 2

Cold formability:
Cold formability general: 2
Deep drawing: 2-3
Bending: 3

Weldability
TIG welding: 2
MIG welding: 3

Solderability
Brazability index: 1
Solderability index: 1

Machinability
Machinability index: 2

Anodizing:
Decorative anodizing surface treatment: 2
Protective anodizing index: 3
Hard anodizing: 2
Color anodizing: 2