

ALUMINIUM ALLOY - WROUGHT**2014A: HEAT TREATABLE****DSM 2.0.0****Wrought: Heat Treatable:**

Initially cast as ingots then worked into the desired form

- **Rolling:** To produce Plate, Sheet or foil.
- **Extrusion:** To produce Tubes, Rods, Angle, Tee, Channel & Box
- **Forming:** More complex shapes from rolled or extruded stock.
- **Forging:** Complex shapes with superior mechanical properties.

Definition:

2014A: Alloyed with copper to increase strength, hardness & the ability to be heat treated. However, this combination reduces ductility, corrosion resistance & weldability. To optimize mechanical properties it is supplied fully heat treated.

The preferred DEK-ASM temper condition is **T6**.

Features:

One of the strongest of heat-treatable alloys used in **heavy duty / high strength applications** it combines durability with high thermal & electrical conductivity. Corrosion resistance can be enhanced with hard-anodising or plating. This is the most widely used forging alloy.

ASM (DEK) Applications:

Pillars; Rounds;

These values are representative and should not be considered as definitive. For critical applications, refer to material data-sheet.

TYPICAL MECHANICAL PROPERTIES @25°C (T6)	
DENSITY:	2820 Kg/m³
YOUNGS MODULUS:	73 GPa
POISSONS RATIO:	0.33
YIELD STRENGTH	300 MPa
Max. TENSILE STRENGTH	480 MPa

Issue	01	02	03	04	05	06	07	08	09
DCR		7135	44721						



ALUMINIUM ALLOY - WROUGHT**2014A: HEAT TREATABLE****DSM 2.0.0****Key Features:**

METHOD	RESULT
Machining	Very Good
Cold Forming	Fair
Brazing & soldering	Not Recommended
Welding – (Mig & Tig)	Not Recommended
Welding – Resistance (spot)	Excellent
Coating applications (anodising)	Good: Hard anodise
Corrosion Resistance (uncoated)	Atmosphere: Poor Marine: Poor

Temper Types:

T6511 Solution heat treated & stress relieved by stretching then artificially aged followed by minor straightening.

T651 Solution heat treated & stress relieved by stretching then artificially aged.

T6 Solution heat treated then artificially aged.

T3 Solution heat treated, cold worked & naturally aged.

Note: The temper condition must be added to the drawing:-

DSM 2.0.0_T6

Supplied Forms:

- **Round Bar:** Diameter 12mm - 250 mm
- **Plate :** Thickness 12mm - 100 mm
- **Sheet :** Thickness 0.2mm – 6,0 mm

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CHEMICAL COMPOSITION					
Copper (Cu)	3.9 / 5.0 %	Iron (Fe)	0.0 / .50 %	Chrome(Cr)	0.0 / .15 %
Mang. (Mn)	0.4 / 1.20 %	Zinc (Zn)	0.0 / .25 %	Alumin (Al)	balance
Silicon (Si)	0.5 / 0.90 %	Titan. (Ti)	0.0 / .15 %		
Magn. (Mg)	0.2 / 0.80 %	Nickel (Ni)	0.0 / .10 %		

CURRENT INTERNATIONAL SPECIFICATION COMPARISON	
BRITISH: EN AW	2014A
GERMAN: DIN	AlCuSiMn
GERMAN: WNR	3.1255
EUROPEAN	EN AW2014A
AMERICAN: AA	2014
JAPANESE GRADE	A2014
CHINESE GRADE	----

REPLACES

BS1474 1987	DESCRIPTION
H15	Wrought Alloy: Heat Treatable

Alternatives:

Alternative materials are allowed only with the express written permission of ASMPT. Please email details of your request to engineering_enquiries@asmpt.com

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