

ALUMINIUM ALLOY - WROUGHT**6060: HEAT TREATABLE****DSM 2.1.11****Wrought: Heat Treatable:**

A popular **extrusion** alloy, initially cast as ingots then worked into the desired form.

- **Extrusion:** To produce Tubes, Rods, Angle, Tee, Channel & Box

Definition:

6060: Alloyed with magnesium & silicon to enhance the ability to be heat treated & extruded. Initially cast as ingots, then worked into form. To optimize mechanical properties it is supplied fully heat treated.

The preferred DEK-ASM temper condition is **T66**.

Features:

Widely used for applications where no special strength properties are required. Commonly used for very complex cross sections offering a very good surface finish. It combines durability with high thermal & electrical conductivity. Corrosion resistance can be enhanced with hard-anodising or plating.

ASM (DEK) Applications:

Support structures for cells, frames & enclosures.

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

TYPICAL MECHANICAL PROPERTIES @25°C (T66)	
DENSITY:	2700 Kg/m ³
YOUNGS MODULUS:	69.5 GPa
POISSONS RATIO:	0.32
YIELD STRENGTH	150 MPa
Max. TENSILE STRENGTH	195 MPa

Issue	01	02	03	04	05	06	07	08	09
DCR	42802	44721							



ALUMINIUM ALLOY - WROUGHT**6060: HEAT TREATABLE****DSM 2.1.11****Key Features:**

METHOD	RESULT
Machining	Acceptable
Cold Forming	Good
Brazing & soldering	Very good
Welding – (Mig & Tig)	Good
Welding – Resistance (spot)	Good
Coating applications (anodising)	Very Good: Hard anodise
Corrosion Resistance (uncoated)	Atmosphere: V.Good Marine: Good

Temper Types:

T4 Solution heat treated & naturally aged at 20°C for between 5 to 10 days.

T5 Cooled from an elevated temperature shaping process & then artificially aged.

T6 Solution heat treated then artificially aged.

T66 Solution heat treated & then artificially aged. Higher mechanical properties than T6 achieved by special control of the process (6000 series)

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

DSM 2.1.11_T66

Supplied Forms:

- Extrusions:

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CHEMICAL COMPOSITION					
Magn. (Mg)	0.35 / 0.6 %	Titan.(Ti)	0.0 / 0.10 %	Alumin (Al)	balance
Silicon (Si)	0.3 / 0.6 %	Mang. (Mn)	0.0 / 0.10 %		
Iron (Fe)	0.1 / 0.3 %	Copper (Cu)	0.0 / 0.10 %		
Zinc (Zn)	0.0 / 0.15 %	Chrome(Cr)	0.0 / .05 %		

CURRENT INTERNATIONAL SPECIFICATION COMPARISON	
BRITISH: EN AW	6060
GERMAN: DIN	AlMgSi0,5
GERMAN: WNR	3.3206
EUROPEAN	EN AW6060
AMERICAN: AA	6060
JAPANESE GRADE	A6063
CHINESE GRADE	----

REPLACES

BS1474 1987	DESCRIPTION
H9	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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