

ALUMINIUM ALLOY**CASTINGS: 2L99****DSC 1.1.3****Cast Aluminium Alloy : 2L 99**

A more tightly controlled version of LM25 for aerospace applications.

Definition:

Suitable for premium grade complex castings offering a high degree of soundness with high strength & good corrosion resistance.

Features:

The silicon content provides excellent casting performance at the slight detriment to machining. **Note:** Tensile properties at elevated temperatures are influenced by: exposure (time) & condition (heat treatment). Good for welding.

ASM (DEK) Applications:

Premium grade complex castings

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

TYPICAL MECHANICAL PROPERTIES		
TEMPER TYPE	2L 99 TF	
CASTING STYLE	SAND	GRAVITY
YIELD STRENGTH: MPa	180	200
TENSILE STRENGTH: MPa	230	280
YOUNGS MODULUS: GPa	71	
POISSONS RATIO:	0.33	
DENSITY: Kg/m ³	2750	

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



ALUMINIUM ALLOY**CASTINGS: 2L99****DSC 1.1.3****Key Features:**

METHOD	RESULT
Machining_ heat treated state	Acceptable: High speed steel tools
Casting- Fluidity	Good:
Brazing & soldering	Very Good & Good
Welding – (Mig & Tig)	Good
Coating applications (anodising)	Fair: grey finish non cosmetic
Corrosion Resistance (uncoated)	Atmosphere:VGood Marine:VGood

Temper Types:

TF	Fully heat treated.
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The response to heat treatment is dependent on the percentage of Magnesium present in composition of the alloy.

Tensile properties fall only slowly and uniformly up to about 200°C at which temperature the strength is reduced by about 20%

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

DSC 1.1.3_TF

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CHEMICAL COMPOSITION					
Silicon (Si)	6.5 / 7.5 %	Copper (Cu)	0.1 % max	Lead (Pb)	0.05 % max
Magn (Mg)	0.2/0,45 %	Nickel (Ni)	0.1 % max	Tin (Sn)	0.05 % max
Iron (Fe)	0.2 % max	Mang. (Mn)	0.1 % max	Alumin (Al)	balance
Titan.(Ti)	0.2 % max	Zinc (Zn)	0.1 % max		

CURRENT INTERNATIONAL SPECIFICATION COMPARISON	
BRITISH: BS2L99	2L 99
GERMAN: DIN	G-AISi7Mg
EUROPEAN: ISO	AlSi7Mg
AMERICAN: AA	A356
JAPANESE GRADE: JIS	AC 4C
CHINESE GRADE	GB/1173-95: ZL101

CONFORMS TO

BS EN 1559:2015	DESCRIPTION
2L 99	Specification for Aluminium Castings

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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