

ALUMINIUM ALLOY**CASTINGS: LM 25****DSC 1.1.1****Cast Aluminium Alloy : LM 25**

A high strength general purpose casting alloy suitable for high quality castings providing strength, definition & good corrosion resistance.

Definition:

Most commonly used for gravity or sand castings, available in the 'as cast' or partially heat treated condition.

Features:

The silicon content provides excellent casting performance at the slight detriment to machining.

Note: Tensile properties at elevated temperatures are influenced by: duration & condition (heat treatment). Good for welding.

ASM (DEK) Applications:

Thin walled castings.

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

TYPICAL MECHANICAL PROPERTIES								
MATERIAL CODE	M		TE		TB7		TF	
TEMPER TYPE	LM25-M		LM25-TE		LM25-TB7		LM25-TF	
CASTING STYLE	SAND	GRAVITY	SAND	GRAVITY	SAND	GRAVITY	SAND	GRAVITY
YIELD STRENGTH: MPa	100	100	150	200	110	110	250	260
TENSILE STRENGTH: MPa	150	200	180	250	160	230	280	320
YOUNGS MODULUS: GPa	71		71		71		71	
POISONS RATIO:	0.33		0.33		0.33		0.33	
DENSITY: Kg/m ³	2680		2680		2680		2680	

Issue	01	02	03	04	05	06	07	08	09
DCR		7135	7140	44721					



ALUMINIUM ALLOY**CASTINGS: LM 25****DSC 1.1.1****Key Features:**

METHOD	RESULT
Machining	Fairly Good: High Speed Tools
Casting- Fluidity	Good: Suitable for thin castings
Brazing & soldering	Very Good & Good
Welding – (Mig & Tig)	Good
Coating applications (anodising)	Good: grey finish non cosmetic
Corrosion Resistance (uncoated)	Atmosphere: V.Good Marine: Good

Temper Types:

M 'As Cast' or as manufactured condition

TE Precipitation treated. This process increases strength & hardness. Lower temperatures and longer times provide better results.

TB7 Solution treated & stabilised.

TF Fully heat treated.

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

DSC 1.1.1_TE: (Vendor Preferred)

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CHEMICAL COMPOSITION					
Silicon (Si)	6.5 / 7.5 %	Copper (Cu)	0.3 % max	Lead (Pb)	0.1 % max
Magn. (Mg)	0.2 / 0.6 %	Titan.(Ti)	0.2 % max	Tin (Sn)	0.05 % max
Iron (Fe)	0.5 % max	Nickel (Ni)	0.1 % max	Alumin (Al)	balance
Mang. (Mn)	0.3 % max	Zinc (Zn)	0.1 % max		

CURRENT INTERNATIONAL SPECIFICATION COMPARISON	
BRITISH: BS EN 1559	LM25
GERMAN: DIN	G-AlSi7Mg
EUROPEAN: EN 1706	AC-42000
AMERICAN: AA	A356
JAPANESE GRADE: JIS	AC 4C
CHINESE GRADE	GB/1173-95: ZL101

COMFORMS TO

BS EN 1559:2015	DESCRIPTION
LM 25	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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