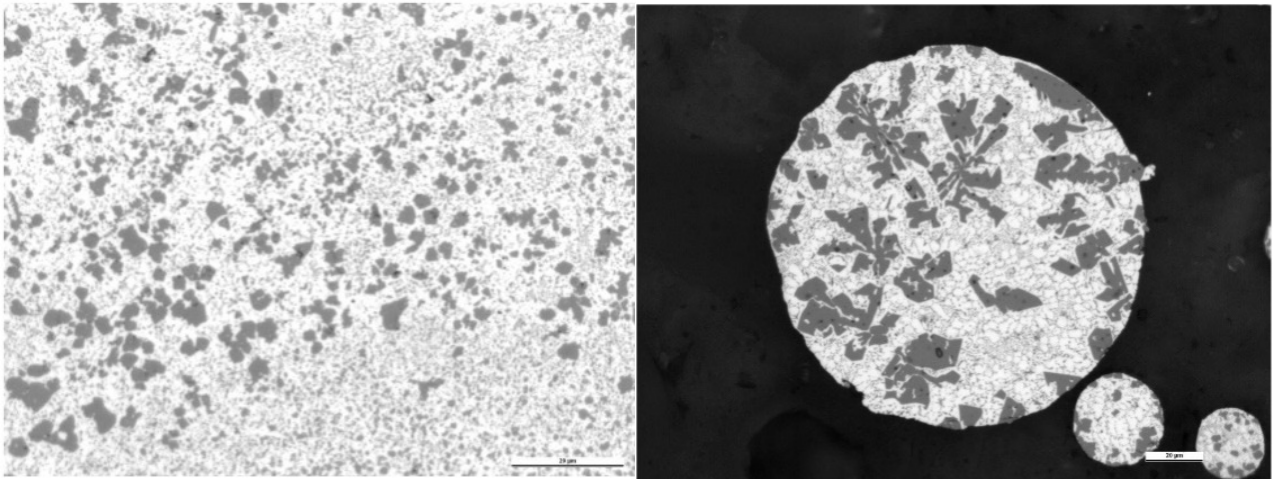


DISPAL[®] S260 AM (AlSi25Cu4Mg)

S260 AM is a high-performance aluminium alloy for additive manufacturing, engineered especially for challenging applications that require high wear resistance. The fine matrix structure of silicon particles together with Cu and Mg elements allow to manufacture components that are natively resistant to the highest of wears activities. Because the silicon is evenly distributed across the part, the outstanding properties are achievable without the need of additional coating, for a long lasting and permanent effect.

Typical applications:

- Oil pump gears
- Hydraulic manifolds
- Spoolvalves



Gränges Powder Metallurgy (GPM) is a global supplier of sprayformed aluminium products and aluminium powders for additive manufacturing, specialized in high performance aluminium alloys. Our products can be found in automotive, aerospace, industrial robotics industries and more. GPM has atomization capacity in France and it is a wholly owned subsidiary of the global aluminium technology Gränges.

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POWDER CHEMICAL COMPOSITION

	Al	Si	Cu	Mg
%	Balance	25	4	1

PHYSICAL PROPERTIES

(At 20°C)

Property	Unit	Value
Absolute density	g/cm ³	2.66 ± 5%
Relative density ¹	[%]	≥ 99.98

THERMAL CONDUCTIVITY

Temperature (°C)	30	100	200	300	400
Value (W/mK)	135.5	132.7	131.5	131.9	124.1

COEFFICIENT OF THERMAL EXPANSION

Property	Unit	Value
CTE-value 20 to 100°C	10 ⁻⁶ /K	17.2 ± 0.5
CTE-value 20 to 200°C	10 ⁻⁶ /K	18.0 ± 0.5
CTE-value 20 to 300°C	10 ⁻⁶ /K	18.8 ± 0.5

MECHANICAL PROPERTIES²

HEAT TREATED CONDITION: (minimum values)

Property	Unit	Temperature	
		Stress relieved	T6 ⁵
Tensile strength, R _m	MPa	250	436.5
Yield strength, R _{p0.2}	MPa	150	391.7
Elongation at break, A	%	2.1	0.5
Young's modulus, E	GPa	68	96.5
Hardness ³ , HV30			167

ROUGHNESS MEASUREMENT⁴

Improvement of surface roughness can be achieved based on customer requirements (minimum values)

	Unit	As built
Roughness average, Ra	[μm]	8,5
Mean roughness depth, Rz	[μm]	61,4

The material properties and mechanical characteristics reflect the current knowledge and experience at the time of publication and do not form a sufficient basis for component design and use on their own. Certain part properties are not guaranteed, and it is the responsibility of the user to qualify the properties and their suitability for specific applications.

[1] Optical density determination at test specimen by light microscopy

[2] Tensile test according to DIN EN Iso 6892-1 Method B at room temperature, test samples were turned before the test; values for vertical specimen (Z direction)

[3] Hardness testing according to DIN ISO 6507 – 1/2/3/4

[4] Roughness measurement according to DIN ISO 13565 – 1/2

[5] Quenching in water at room temperature