

## MATERIAL DATA SHEET

# ALUMINUM

AlSi10Mg

### MECHANICAL PROPERTIES\*

L-PBF		AS-BUILT	HEAT TREATMENT A	ASTM F3318SR
Yield Strength [MPa]	XY	227 ± 6	160 ± 2	>138
	Z	221 ± 23	193 ± 3	
Ultimate Tensile Strength [MPa]	XY	367 ± 8	261 ± 3	>241
	Z	389 ± 12	283 ± 3	
Elongation [%]	XY	9 ± 1	18 ± 4	>10
	Z	6 ± 1	16 ± 1	

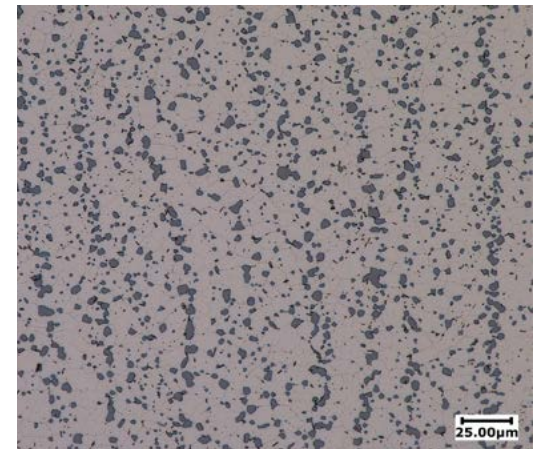
		HEAT TREATMENT B	ASTM F3318 HIP+T6
Yield Strength [MPa]	XY	251 ± 6	>207
	Z	250 ± 3	
Ultimate Tensile Strength [MPa]	XY	311 ± 7	>276
	Z	308 ± 6	
Elongation [%]	XY	14 ± 2	>10
	Z	15 ± 2	

### PHYSICAL PROPERTIES

	AS-BUILT	AFTER HEAT TREATMENT		
Relative Density [%]	>99.0	>99.0		
	PARAMETER 1	PARAMETER 2	PARAMETER 3	
Surface Roughness [Ra µm]	up to 4 <sup>‡</sup>	up to 2.5 <sup>‡</sup>	up to 1.5 <sup>‡</sup>	
Minimum Wall Thickness [mm]	0.5 <sup>‡</sup>	0.3 <sup>‡</sup>	0.8 <sup>‡</sup>	

‡ Properties are dependant on geometry and orientation

\* All data is collected using round machined ASTM E8M tensile coupons



Microstructure of T6 Aluminum  
AlSi10Mg

### PROCESSING CAPABILITIES

- Additive Manufacturing Solutions
- Printing Optimization
- Heat Treatment
- Deburring and Finishing
- CNC Machining
- Computed Tomography
- Mechanical and Metallurgical Testing
- Precision Metrology
- AS9100 / ISO 9001:2015

