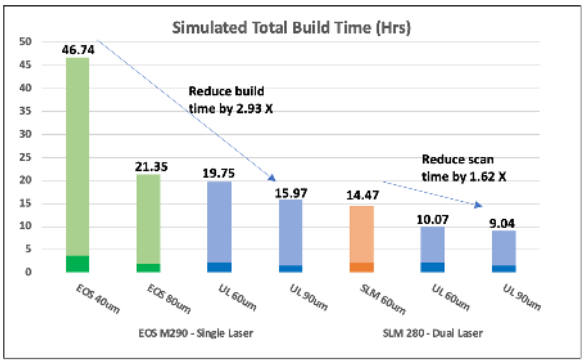
UNIFORMITY LABS

No Compromise Metal AM

UniFuse™ 316L 60um & 90um Automotive Bracket Use Case

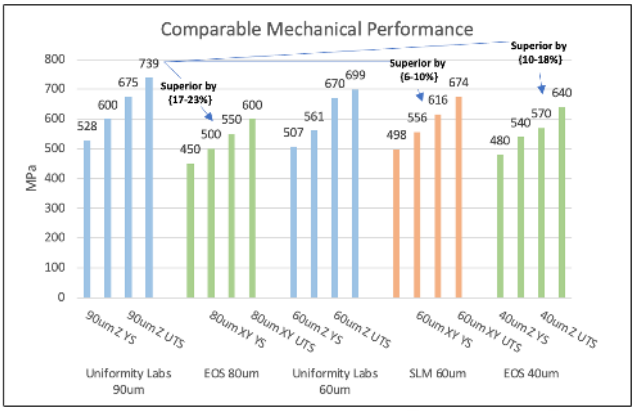
UniFuse™ 316L 90um 400W and 60um 400W mechanical properties are superior in UTS, YS, Elongation, and density compared to the competitor's lower layer thickness and same layer thickness parameter sets. In this example, Uniformity's powder and High Performance Scanning achieves a build time 2.9X faster when compared to the competitor's lower layer thickness scan strategies targeting best-in-class mechanical properties. This throughput improvement is typical for UniFuse™ 316L builds.



Uniformity Parameters: Exposure Time, Recoating Time

SLM Parameters: Exposure Time, Recoating Time

EOS Parameters: Exposure Time, Recoating Time



Vertical Surface Roughness Ra (µm)	
EOS 40um	8 – 9 um
SLM 60um	7 – 17 um
Uniformity 60um	9 – 11.2 um
EOS 80um	9 – 15 um
Uniformity 90um	9.4 – 13 um

Elongation	Vertical	Horiz.
EOS 40um	51%	40%
SLM 60um	44%	40%
Uniformity 60um	52.3%	55.7%
EOS 80um	45%	35%
Uniformity 90um	49.4%	53.5%

Density	g/cm^3	%
EOS 40um	≥ 7.97	≥ 99.6
SLM 60um	≥ 7.96	≥ 99.5
Uniformity 60um	≥ 7.99	≥ 99.9
EOS 80um	NA	NA
Uniformity 90um	≥ 7.99	≥ 99.9

All simulations are done with 12 components on the build plate.

- Max capacity
- EOSM290 – 12 parts
- SLM 280 – 15 parts

Contacts:

Walter Tersigni – Vice President Sales
tersigni@uniformitylabs.com

John Baliotti – Director of Sales
baliotti@uniformitylabs.com

Terry Cambron– Director of Sales
cambron@uniformitylabs.com

Brent Sharp – Director of Sales
sharp@uniformitylabs.com

SCAN ME