



*Cerakote is an inorganic polymeric thin-film liquid ceramic coating that is designed to be applied directly to the substrate in a single layer application.* Cerakote provides a wide variety of functional properties that complement the Nylon 12 material such as: scratch/abrasion resistance, UV stability, chemical resistance, hydrophobic properties, color consistency, and much more.

To demonstrate the performance attributes of Cerakote coatings on Nylon 12 MJF printed parts, the following tests were administered:

### TESTING PARAMETERS

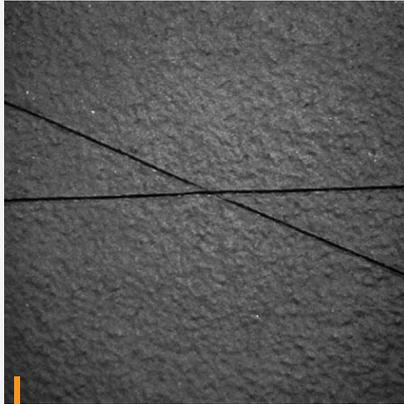
- Parts were provided by HP for testing and coating was applied by the Cerakote Technical Training team.
- Cerakote H-146 Graphite Black and H-297 Stormtrooper White were applied to Nylon 12 MJF printed parts.
- The recommended application process for polymers listed in the Cerakote H & Elite Application Guide was used.
- The test panels were 3"x5" and 3mm thick.

TEST METHOD	H-146 GRAPHITE BLACK	H-297 STORMTROOPER WHITE
<i>ASTM D3359</i> Adhesion (Method A)	5A	4A
<i>ASTM D3359</i> Adhesion (Method B)	4B	4B
<i>ASTM D3363</i> Scratch/Gouge	9H/7H	9H/6H
<i>ASTM D4752</i> 24 Hr. Submersion (Modified) – Water		
Before and after mass	+0.03 grams	+0.02 grams
Visual color change	No discoloration	No discoloration
<i>ASTM D4752</i> 24 Hr. Submersion (Modified) – Acetone		
Before and after mass	+0.07 grams	+0.11 grams
Visual color change	No discoloration	No discoloration
<i>ASTM D4752</i> 24 Hr. Submersion (Modified) – Diesel		
Before and after mass	+0.02 grams	+0.02 grams
Visual color change	No discoloration	No discoloration
<i>ASTM D1729</i> Color – Standard Deviation 16 Samples		
L/A/B Color	L:0.4 / A:0.009 / B:0.06	L:0.18 / A:0.03 / B:0.13
Deviation of mass across 16 samples	Mass 0.42 Grams	Mass 0.55 Grams
<i>ASTM D523</i> Color – Standard Deviation 16 Samples		
Gloss unit standard deviation at 60°	0.14	0.65

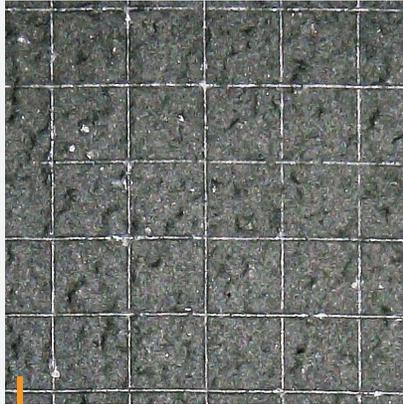
# CERAKOTE

## TESTING ON HP MULTI JET FUSION

Cerakote's testing proves that applying Cerakote to MJF parts provides a final finish that has additional durability needed to make a MJF part complete.



ASTM D3359 - Adhesion Method A  
5A Adhesion



ASTM D3359 - Adhesion Method B  
4B Adhesion



ASTM D3363 - Scratch/Gouge  
9H/7H

For more information about Cerakote on HP's MJF technology visit [Cerakote.com](https://cerakote.com) > Industries > 3D Printing. You can also email us at [info@cerakote.com](mailto:info@cerakote.com) or call us at 866-774-7628.

## CERAKOTE OFFERS ENDLESS CUSTOMIZATION OPPORTUNITIES

