STEREOLITHOGRAPHY

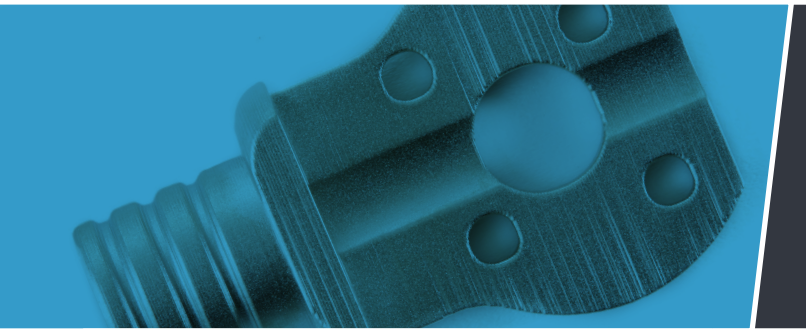
# METAL PLATING
## PRODUCT SPECIFICATIONS

## DESCRIPTION:

Metal plating is a process/material combination that produces ceramic-filled composite stereolithography parts that are coated with a structural nickel plating for strength. The core material is a ceramic-filled composite stereolithography material that is of extreme strength, stiffness, and temperature resistance. After the components are built, they are electroform plated with a prescribed thickeness of structural nickel. To ensure dimensionality of the parts is maintained, software is used to adjust the stereolithography components prior to their fabrication to account for the targeted plating thickness. Metal-plated components can withstand high temperatures, abrasion, and highly corrosive environments.

## APPLICATIONS:

Metal plating is a process/material combination that enables prototyping of parts that would normally be die-cast or machined from aluminum, magnesium, or zinc. Examples of applications include high-speed wind tunnel models, kinematic mechanical assemblies, and factory assembly fixtures.



## KEY BENEFITS:

- Good temperature resistance
- Corrosion resistant
- Lightweight alternative to metal parts

## PROPERTIES:

| ASTM | Property Description | SLArmor 10% metal volume | SLArmor 20% metal volume | SLArmor 30% metal volume |
|---|---|---|---|---|
| D638M | Tensile Strength-Mpa (ksi) | 100 (14.5) | 145 (21) | 200 (29) |
| | Elongation at Break (%) | 0.9 | 1.04 | 1 |
| | Mod. of Elasticity-Mpa (ksi) | 21,000 (3,046) | 31,000 (4,496) | 42,000 (6,100) |
| D790M | Flexural Strength-Mpa (ksi) | 300 (43.5) | 420 (61) | 600 (87) |
| | Flexural Modulus-Mpa (ksi) | 28,000 (4,060) | 44,000 (6,380 | 54,000 (7,830) |
| D648-98c | Density (g/cm3) | 2.33 | 3.06 | 3.79 |