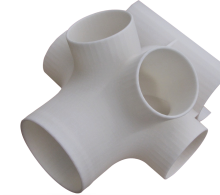
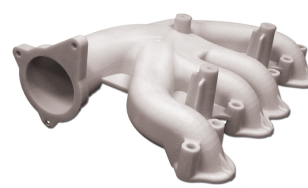




# SELECTIVE LASER SINTERING (SLS) MATERIAL

Selective Laser Sintering (SLS) uses a Nylon-based powder similar to actual engineering thermoplastics, so parts exhibit greater toughness and are accurate, but have rough surface and lack fine details. SLS offers a large build volume, can produce part with highly complex geometries and creates durable prototypes.



| SLS POLYAMIDES       |                                       | Color      | Density                                 | Elongation at Break | Flexural Strength | Flexural Modulus                             | Heat Deflection Temp. @ 264 psi | Heat Deflection Temp. @ 66 psi | Izod Impact Strength (notched @23°C) | Izod Impact Strength (unnotched @23°C) | Tensile Modulus                              | Tensile Strength                   | As Processed Surface Finished   | Moisture Absorption - (24 Hours, 23°C) | Flammability |
|----------------------|---------------------------------------|------------|---|---------------------|-------------------|--|---------------------------------|--------------------------------|--------------------------------------|--|--|------------------------------------|---------------------------------|--|--------------|
| ↑<br>Prototypes<br>↓ | NYLON12 PA *<br>Nylon 12              | White      | 0.034 lb/in <sup>3</sup><br>(0.95 g/cc) | 15% - 25%           | —                 | 160,995 - 198,705 psi<br>(1,370 - 1,110 MPa) | 187 - 203°F<br>(86 - 95°C)      | 351 - 356°F<br>(177 - 180°C)   | 0.6 ft-lb/in<br>(32 J/m)             | 63 ft-lb/in<br>(336 J/m)               | 232,060 - 268,320 psi<br>(1,600 - 1,850 MPa) | 6,090 - 7,250 psi<br>(42 - 50 MPa) | 300 - 400 Ra<br>(7.6 - 10.2 μm) | 0.0041                                 | N/A          |
|                      | NYLON12 GF *<br>Glass Filled Nylon 12 | Light Grey | 0.045 lb/in <sup>3</sup><br>(1.40 g/cc) | 3.5% - 6%           | —                 | 319,000 psi<br>(2,200 MPa)                   | 230 - 273°F<br>(110 - 134 °C)   | 347 - 354°F<br>(175 - 179°C)   | 0.8 ft-lb/i<br>(41 J/m)              | 2.3 ft-lb/in<br>(123 J/m)              | 428,625 - 590,000 psi<br>(3,300 - 4,068 MPa) | 6,530 psi<br>(45 MPa)              | 200 - 300 Ra<br>(5.1 - 7.6 μm)  | 0.0035                                 | N/A          |

\*Mechanical property data obtained from supplier data sheets. \*\*Mechanical property data obtained from independent tests performed by an outside lab.

†Methods: †4 CFR 25.853(a), Amendment 25-83, Appendix F, Part I. Boeing's test method BSS 7230, Revision H, Method F1. Airbus Industries test method AITM 2.0002A, Issue