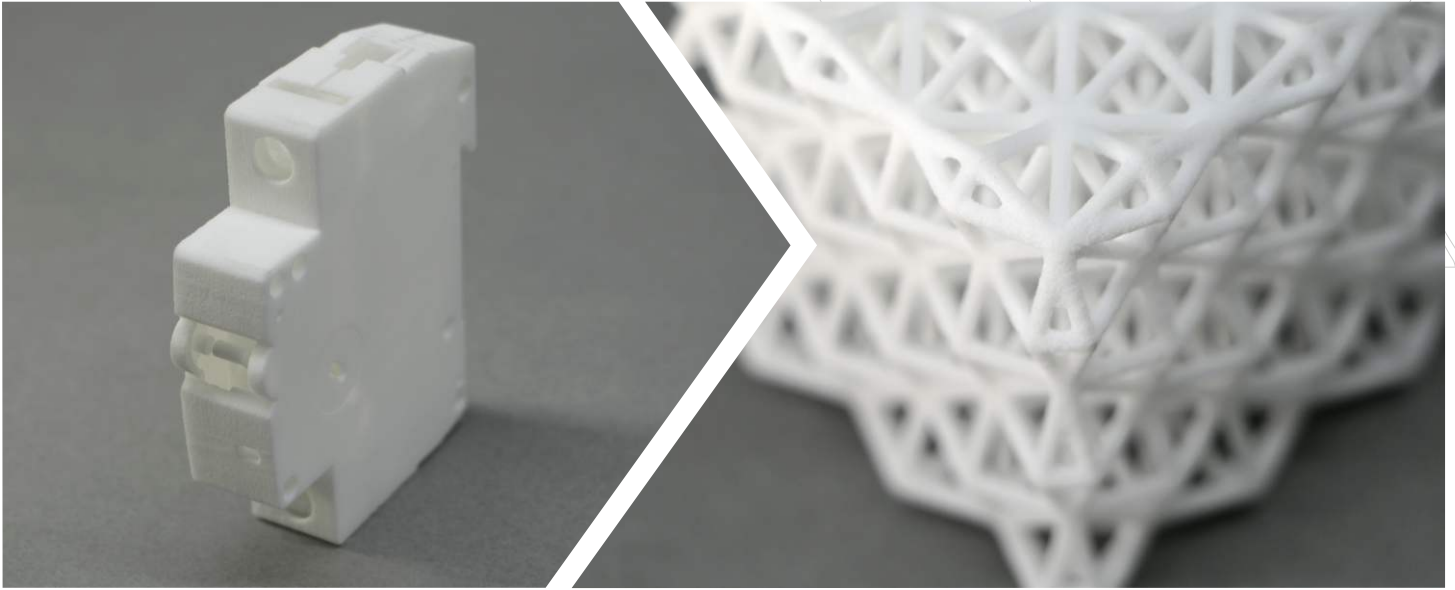


Nylon



Generic Data :

| | |
|--------------------|---------------------------------|
| Technical Name | PA 2200 |
| Process | Selective Laser Sintering (SLS) |
| Layer Thickness | 100 μm |
| Accuracy | (+/-) 200 μm |
| Maximum Build Size | 340x340x600 mm |

Nylon or PA2200 is a polyamide 12 compound. Due to excellent mechanical properties and good elongation at break, the material is often used in applications that require fully functional parts of highest quality.

Nylon is white in color and comes with an inherent grainy surface finish. Since Nylon parts are fabricated using Selective Laser Sintering Technology, there is no support structure generation, making it suitable for parts which are complex and which have intricate geometries and moving part assemblies.

Characteristics

- + Strong and flexible
- + Good mechanical and chemical properties
- + No support structures
- + FDA approved
- Inherent grainy surface finish
- Natural white color may dull after repeated use

Applications

- ✓ Fully functional parts
- ✓ Best suited for snap-fit assemblies and moving parts
- ✓ Automotive, medical, packaging industries
- ✓ Complex and intricate geometries

| Material Properties | Value | Unit | Standard Test Method |
|---|-------|-------------------|----------------------|
| Density (sintered powder) | 0.9 | g/cm ³ | EOS Method |
| Powder Color (Natural) | White | - | - |
| Average Grain size | 56 | μm | ISO 13320-11 |
| | 2.2 | mil | Laser diffraction |
| Mechanical Properties | | | |
| Tensile Modulus | | | |
| X-direction | 1700 | MPa | ISO 527-1/-2 |
| Y-direction | | | |
| Z-direction | | | |
| Ultimate Tensile Strength | | | |
| X-direction | 50 | MPa | ISO 527-1/-2 |
| Y-direction | | | |
| Z-direction | | | |
| Elongation at Break | | | |
| X-direction | 20 | % | ISO 527-1/-2 |
| Y-direction | | | |
| Z-direction | | | |
| Flexural Modulus (23°C, X-direction) | 1500 | MPa | ISO 178 |
| Charpy impact strength (+23°C, X-direction) | 53 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C, X-direction) | 4.8 | kJ/m ² | ISO 179/1eA |
| Izod Impact notched (23°C) | 4.4 | kJ/m ² | ISO 180/1A |
| Shore Hardness (15s) | 75 | Scale D | ISO 7619-1 |
| Thermal Properties | | | |
| Melting Point (20°C/min) | 176 | °C | ISO 11357-1/-3 |
| Vicat Softening Temperature (50°C/h 50N) | 163 | °C | ISO 306 |

Certification

FDA approval acc. To USP Biological Test (classification VI/121°C)