



X1 LUMIA INDUSTRIAL MATERIAL GUIDE

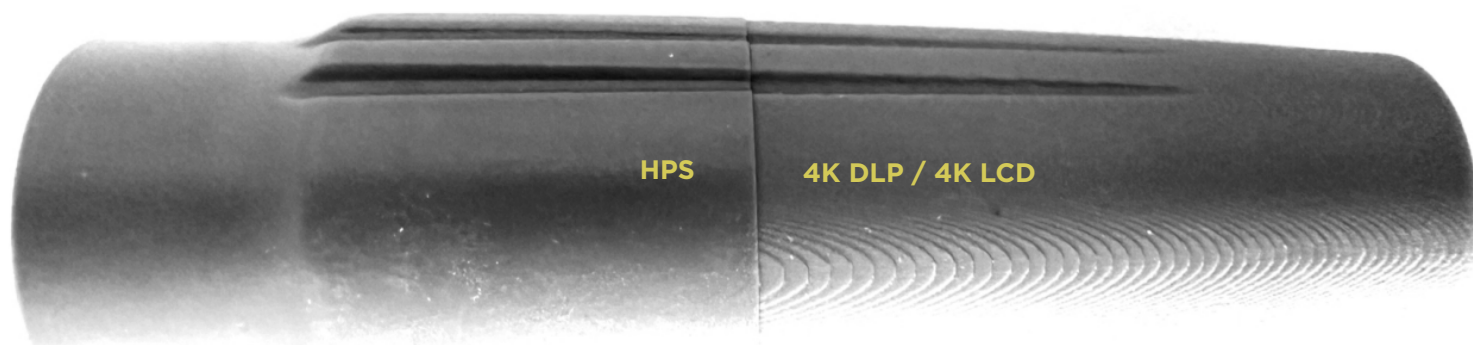
Hybrid PhotoSynthesis™ (HPS) and TruLayer™

Eliminate all tradeoffs between throughput, accuracy, feature resolution and surface finish.

The Lumia X1 is a Hi-Speed SLA system that encompasses patented Hybrid PhotoSynthesis (HPS) and TruLayer Technology.

HPS technology uses multiple energy sources to simultaneously image both expansive flat areas and intricate details. Meanwhile, TruLayer Technology facilitates rapid detachment of the active print layer, seamlessly transitioning to the next layer.

With the Lumia X1, traditional tradeoffs among accuracy, surface finish, throughput, and print reliability are now obsolete and accomplished within a single print. Standard waiting periods between layers are eradicated, freeing the process from limitations on the size and bulk of printed cross-sections. Achieving diverse geometries is now possible with 2X-20X higher throughput compared to current technologies.





Ultracur3D® RG 3280

Applications

Tooling, Molding, Wind Tunnel Testing

Tech-Specs

Solid Part Density: 1.73g/cc
Tensile Modulus: 10600 MPa
Elongation at Break: 1.3%
HDT , 0.455MPa: 284°C

Features

- Ultracur3D® RG 3280 is the first composite material we are adding to our rigid product line. Due to the high loading of ceramic particles, this material has an extremely high stiffness around 10 GPa and an HDT B above 280°C.

Ultracur3D® ST45

Applications

Electrical Connectors

Tech-Specs

Solid Part Density: 1.23g/cc
Tensile Modulus: 2000 MPa
Elongation at Break: 21%
HDT , 0.45MPa: 63°C

Features

Ultracur3D® ST 45, Ultracur3D® ST 45 M, Ultracur3D® ST 45 B by Forward AM are reactive urethane photopolymers for Tough applications that delivers an excellent combination of high strength, plus long-term toughness and impact resistance. It is very well suited for 3D printing high performance functional parts requiring high accuracy and mechanical strength. It ensures very fast printing and outstanding surface finishing, and is available as fully colorless (clear) and black

Ultracur3D® RG 1100

Applications

Low Pressure Molding

Tech-Specs

Solid Part Density: 1.2g/cc
Tensile Modulus: 3080 MPa
Elongation at Break: 5%
HDT , 0.455MPa: 116°C

Features

Ultracur3D® RG 1100 by Forward AM is a high-strength polyurethane-based engineering grade resin with mechanical properties comparable to widely spread injection molding grades used in automotive or other demanding industries. Due to its high heat deflection temperature (HDT 116°C), its good chemical resistance and long-term UV-stability this material is perfectly suitable for applications such as automotive connectors, demanding engineering parts, exterior covers, brackets and housings.

Additional Product Information
888-315-5103, or sales@axtra3d.com





Loctite® 3D 3843™

Applications

Manufacturing aids, Jigs and fixtures, Housings, Covers and insoles

Tech-Specs

Solid Part Density: 1.20g/cc
Tensile Modulus: 1080 MPa
Elongation at Break: 43%

Features

- High impact strength
- Semi-flexible
- Good impact resistance
- Excellent and matte surface finish
- Biocompatible capable per ISO10993-23 and ISO10993-5

Loctite® 3D IND3380™ - ESD

Applications

Jigs, Fixtures, Electronic Manufacturing, Tooling at high temperature and low pressure

Tech-Specs

Tensile Strength: 50 MPa
Tensile Modulus: 3000 MPa
Elongation at Break: 1-2%

Features

A high-temperature-resistant resin featuring ESD capabilities, and high stiffness. LOCTITE 3D IND3380, with its smooth surface finish and exceptional chemical resistance, serves as an excellent choice for jigs, fixtures, and electronic manufacturing. Its unique properties also make it a dependable option for various tooling applications, providing versatile solutions to meet diverse manufacturing requirements.

Loctite® 3D IND249™

Applications

Electronic Manufacturing,

Tech-Specs

Tensile Strength: 98 MPa
Tensile Modulus: 3300 MPa
Elongation at Break: 5%

Features

Stiffness & Thermal Durability
LOCTITE 3D IND249 is a high-temperature, high-strength material that prints challenging geometries with fine feature resolution. This low-viscosity material features exceptionally high green strength to enable ease of processing. Stiffness and thermal durability make LOCTITE 3D IND249 ideal for production applications, including mold tooling, manufacturing aids, and other complex geometries.

Additional Product Information
888-315-5103, or sales@axtra3d.com





3D SYSTEMS®

Figure 4® PRO-BLK 10

Applications

Motor housings, Connectors Snap-fits,
Automotive interior components

Tech-Specs

Ultimate Tensile Strength: 63 MPa
Solid Part Density: 1.16g/cc
Tensile Modulus: 2320 MPa
Elongation at Break: 12%

Features

- Improved environmental stability of mechanical and performance properties over time
- Fast throughput for part-in-hand with no secondary thermal cure required
- Simple, single solvent cleaning
- Excellent surface quality and repeatability
- Accurate, low distortion material for fast first article print success

Figure 4® Hi-Temp 300-AMB

Applications

High temperature component testing
Low pressure molding/tooling.
Overmolding

Tech-Specs

Solid Part Density: 1.3g/cc
Tensile Modulus: 4100 MPa
HDT: >300°C

Features

- High-temperature resistant
- Translucent
- Impressive visualization properties
- No secondary thermal post-cure required
- Long term environmental UV and humidity stability

Figure 4® Tough Clear

Applications

Lighting covers, cases, light guides
Structural brackets, snap-fits, fasteners
End-use manufacturing of high volume, small plastic parts,
Consumer goods, consumer packaging

Tech-Specs

Solid Part Density: 1.2g/cc
Tensile Modulus: 4230 MPa
Elongation at Break: 12%

Features

- Excellent clarity that can be further improved with post-processing steps like clear coating
- Ability to go from prototype to production parts using clear or transparent aesthetics
- Supports functional testing in outdoor settings
- Automotive fluid and chemical compatibility
- Prototypes have longer lives and can be reused for longer periods of time

Figure 4® MED-WHT 10

Applications

General medical applications requiring biocompatibility, sterilization and/or thermal resistance. Splints, surgical drill guides, bone models. Parts requiring rigidity with high temperature and/or water resistance. Parts with high-definition details

Tech-Specs

Solid Part Density: 1.27g/cc
Tensile Modulus: 3090 MPa
Elongation at Break: 3%

Features

- Biocompatible capable per ISO10993-5 and ISO10993-10
- Sterilizable by autoclave
- High temperature testing
- True-to-CAD accuracy and crisp feature detail
- Smooth surfaces for beautiful display models

Additional Product Information
888-315-5103, or sales@axtra3d.com



ARKEMA

Nextdimension® N3D-FR512™

Applications

Flame Retardant Material

Tech-Specs

Tensile Modulus: 5100 MPa
Elongation at Break: 4.2%
UL-94V: V-0 @ 0.8mm

Features

N3D-FR512 is a flame-retardant material that achieves a UL-94 rating of V-0 at 0.8 mm while maintaining good print accuracy with fine feature parts. N3D-FR512 is characterized by excellent green strength allowing for robust printing and easy cleanup and processing.

S Spectroplast

TruSil-X50 for Axtra3D

Applications

General Purpose Silicone,

Tech-Specs

Modulus (N/mm2): 0.939
Tensile (N/mm2): 6.98
Elongation (%): 345
Tear: 8.4
Shore: 50A

Features

Real Silicone

Additional Product Information
888-315-5103, or sales@axtra3d.com

