HP 3D High Reusability PA12 30L[1] (13 kg)

Engineering-grade thermoplastics, optimized for 3D printing efficiency

Picture taken after graphite post-processing

Pictures taken after dye post-processing

Pictures taken after dye post-processing

Fine detail and high dimensional accuracy

Get precise small features and detail such as small fine holes, walls and shafts with dimensional accuracy thanks to HP's unique Multi-Agent printing process

Produce strong quality parts

Robust thermoplastic that optimizes part quality with cost, producing strong structures

Produce complex parts and lattice structures

Ideal for complex assemblies, housings, enclosures and connectors

Reduce Total Cost of Ownership and produce quality parts with HP 3D High Reusability PA12, a strong, multi-purpose thermoplastic that enables industry-leading surplus powder reusability.[2]

Lowest Cost-Per-Part[3]

- Optimize cost and part quality,[3] with a cost-efficient material that offers industry-leading reusability.[2]
- No need to throw away reused powder anymore.[4]
- Produce quality parts batch-after-batch reusing surplus powder time after time.[2]
- Achieve minimal powder wastage between production cycles.
- No need to track powder history. Stable performance with only 20% refresh rate.[2]

Optimized for HP Multi Jet Fusion: the best balance between strength and reusability

- A strong thermoplastic for functional prototyping and final parts.
- Optimized for HP's Multi Jet Fusion platform to increase printer safety and deliver truly functional parts.
- Produce high-density parts, with balanced property profiles.
- Excellent chemical resistance to oils, greases, aliphatic hydrocarbons and alkalies.
- Biocompatible material.[5]
- Optimal for post finishing processes.

For more information, please visit
hp.com/go/3DMaterials

Technical specifications

Category	Measurement	Value	Method
General Properties	Powder melting point (DSC)	187 °C/369 °F	ASTM D3418
	Particle size	60 µm	ASTM 03451
	Bulk density of powder	0.425 g/cm^3	ASTM D1895
	Density of parts	1.01 g/cm^3	ASTM D792
Mechanical Properties	Tensile Strength, Max Load[6,7] - XY	45-50 MPa/6530-7250 psi	ASTM D638
	Tensile Strength, Max Load[6,7] - Z	45-50 MPa/6530-7250 psi	ASTM D638
	Tensile Modulus[6,7] - XY	1700-1900 MPa/230-280 ksi	ASTM D638
	Tensile Modulus[6,7] - Z	1700-1900 MPa/230-280 ksi	ASTM D638
	Elongation at Break[6,7] - XY	20-25%	ASTM D638
	Elongation at Break[6,7] - Z	15-20%	ASTM D638
	Impact Strength[6] (notched Izod, 23˚C) - XY	3-4 kJ/m^2 - 1.5-1.9 ft-lb/in^2	ASTM D256
	Impact Strength[6] (notched Izod, 23˚C) - Z	3-4 kJ/m^2 - 1.5-1.9 ft-lb/in^2	ASTM D256
Thermal Properties	Heat Deflection Temperature (@ 0.45 MPa) - Z	170-175 °C/340-350 °F	ASTM D648
	Heat Deflection Temperature (@ 1.82 MPa) - Z	90-95 °C/190-200 °F	ASTM D648

Ordering Information

Product name	HP 3D High Reusability PA12 30L[1] (13 kg)
Product Number	V1R10A HP 3D
Weight	13 kg
Compatibility	HP Jet Fusion 3D 4200/3200 Printing Solution
Dimensions	Box: 600 x 333 x 301.8 mm

Eco Highlights

- Powders or agents and are not classified as hazardous[8]
- Enclosed printing system and automated powder management, including post-processing, for a cleaner and more comfortable environment[9]
- Minimum waste thanks to high reusability of powder[10]

Find out more about HP sustainable solutions at
hp.com/ecosolutions

1. Offers industry-leading reusability of surplus powder. 30L refers to the container size and not the actual materials volume. Materials are measured in kg.
2. HP MJF Solution with HP High Reusability PA12 has the highest post-production surplus powder reusability with 80% reusability vs any other powder based 3DP technology using PA12 material. Stable performance with only 20% powder refresh rate.
3. Based on internal testing and public data, HP Jet Fusion 3D printing solution average printing cost-per-part is half the cost of comparable FDM & SLS printer solutions from $100,000 USD to $300,000 USD, when averaged together and not taken individually, on market as of April 2016. Cost analysis based on: standard solution configuration price, supplies price, and maintenance costs recommended by manufacturer. Cost criteria: printing 1-2 buckets per day/ 5 days per week over 1 year of 30-gram parts at 10% packing density using the powder reusability ratio recommended by manufacturer.
4. Per packing densities >20%.
5. Biocompatibility, complying with USP Class I-VI Testing.
6. Additional tests are being done to reduce the interval.
7. Test results realized under the ASTM D638, speciments type V.
8. The HP powder and agents do not meet the criteria for classification as hazardous according to Regulation (EC) 1272/2008 as amended.
9. The term “cleaner” does not refer to any indoor air quality requirements and/or consider related air quality regulations or testing that may be applicable.
10. HP Jet Fusion 3D print solution with HP 3D High Reusability PA12 has the highest post-production surplus powder reusability with 80% reusability vs any other powder based 3DP technology using PA12 material. Consistent performance with only 20% powder refresh rate.

Learn more at
hp.com/go/3DMaterials

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This is an HP Indigo digital print.