

Stratasys Origin[®] One



3D printer for production parts and tooling
with next-level part quality at scale



Heat-Resistant

Sample Application - F16 Aircraft Hydraulic Cable Clamp, requiring strict accuracy while enduring hot and cold temperatures, vibration, flammability and chemical exposure. The new design printed on the Origin One delivered twice the strength with a 5% reduction in weight.

Material - Henkel 3955, with V-0 UL94 flammability & FST properties, 285 C HDT, and a tensile modulus of 3786 MPa.

Throughput - 20 parts per build (0.65 hours), over 12,000 parts per month per printer.

Tough & Rigid

Sample Application - Lower leg of a Quadrupedal Unmanned Ground Robot used in the defense industry. The part requires high flexural and compressive strength and impact resistance, to support aggressive robot motion across unstructured environments.

Material - Henkel 3172, 70 J/m impact strength, strong flexural and tensile properties, elongation at break over 100%, and 52C HDT.

Throughput - 20 parts per build (7.5 hours), over 1,600 parts per month per printer.

Flexible

Sample Application - Handlebar grip, requiring impact absorption, flexibility, and cushioning properties to absorb the mechanical shock and vibrations that occur during biking in a durable, UV-stable material.

Material - Henkel IND402, 230% elongation at break, 28 N/mm tear strength, and 35% rebound, providing excellent cushioning, rebound, and long-term durability.

Throughput - 15 parts per build (11.75 hours), over 750 parts per month per printer.

Medical

Sample Application - Respirator adapter, used to aid airflow within a respirator device and requires biocompatible properties. The global shortage of respirators due to COVID-19 created high demand for critical production parts with short lead times.

Material - Henkel MED413 White, Biocompatible (passed ASTM cytotoxicity, sensitization, and irritation testing), 55J/m impact strength and elongation at break over 50%.

Throughput - 12 parts per build (4.3 hours), over 1,500 parts per month per printer.

Molds

Sample Application - Mold for an elastomeric polyurethane wheel, compatible with a variety of mold release agents and urethane chemistries, molds have produced over 1,500 parts (and counting) with no mold degradation.

Material - Henkel IND403, suitable for low to moderate temp molds and tools when accuracy, surface finish, and durability are required. 100C HDT and 87 MPa tensile strength.

Throughput - 4 sets of molds (8 parts) per build (1.2 hours), over 1,700 sets per month per printer.

All parts are as-printed with no secondary finishing, sanding, or painting.

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