



R5 and R11

R5 and R11 is a liquid photopolymer that produces robust, accurate, and functional parts. The material offers superior chemical resistance, a wide processing latitude, and excellent tolerance to a broad temperature and humidity range during and after build. Parts created from R5 and R11 exhibit superior fatigue properties, strong memory retention, and high quality up-facing and down-facing surfaces. R5 and R11 also offers a good balance of properties between rigidity and functionality.

Mechanical Properties*			
ASTM Method	Description	R5	R11
D638M	Tensile Strength Elongation at Break Elongation at Yield Modulus of Elasticity	31-39 MPa 11-25 % 16 % 1,245-1,510 MPa	50 MPa 8 % 13 % 1,245-1,510 MPa
D790M	Flexural Strength Flexural Modulus	40-45 MPa 1,190-1,383 MPa	75 MPa 2450 MPa
D256A	Izod Impact-Notched	0.27-0.50 J/cm	0.35 J/m
D2204	Hardness (Shore D)	81 Shore	85 Shore
D570-98	Water Absorption	0.78 %	0.71 %
D1004	Graves Tear	154,287 N/m	N/A

Thermal and Electrical Properties*			
ASTM Method	Description	R5	R11
E381-00	C.T.E. -40°C - 0°C C.T.E. 0°C - 50°C C.T.E. 50°C - 100°C C.T.E. 100°C - 150°C	55 - 63 µm/m*K 88 - 94 µm/m*K 170 - 189 µm/m*K 192 - 201 µm/m*K	N/A N/A N/A N/A
E1545-00	Glass Transition Temperature	37 - 52°C	N/A
D648-98c	HDT @ 0.46 MPa HDT @ 1.81 MPa	84.5 - 102.6°C 65.4 - 88°C	N/A

*All data provided is preliminary data and must be verified by the individual user.

Recommended Machines
Apollo, Aureus, Desktop XL, Perfactory® 4 Standard, Perfactory® 4 Standard XL, Perfactory® 4 Mini, Perfactory® 4 Mini XL, Perfactory® 3 Mini Multi Lens

Applications
Aerospace, Animation and Entertainment, Architecture and Art, Automotive, Consumer Packaged Goods, Education, Electronics, Manufacturing, Sporting Goods, Toys



EnvisionTEC GmbH

Brüsseler Straße 51 • D-45968
Gladbeck • Germany
Phone +49 2043 9875-0
Fax +49 2043 9875-99

EnvisionTEC, Inc.

15162 S. Commerce Dr.
Dearborn, MI 48120 • USA
Phone +1-313-436-4300
Fax +1-313-436-4303

www.envisiontec.com

info@envisiontec.com