

R5 - R11

Robust, accurate, functional Hybrid resin for **Perfactory®** Mini, Multi, Standard & **Vanquish®** Systems

Description

PERFACTORY® 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 PERFACTORY® R5 and R11 exhibit superior fatigue properties, strong memory retention, and high quality up-facing and down-facing surfaces. PERFACTORY® R5 and R11 also offers a good balance of properties between rigidity and functionality.

Application

Parts that mimic polypropylene. Ideal for master patterns in rubber molding applications.

Durable and robust applications include: Electrical housings, Medical Products, Snap fit parts, Jewellery Products, Consumer Products and Automobile applications

Mechanical Properties (Metric)

ASTM Method	Description	Perfactory® R5	Perfactory® 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
D542	Index of refraction	N/A	N/A
D2204	Hardness (Shore D)	81	85
D570-98	Water Absorption	0.78 %	0.71 %
D1004	Graves Tear	154,287 N/m	N/A

Thermal & Electrical Properties (Metric)

ASTM Method	Description	Perfactory® R5
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-°C 88 - 94 µm/m-°C 170 - 189 µm/m-°C 192 - 201 µm/m-°C
E1545-00	Tg	37 - 52°C
D648-98c	HDT @ 0.46 MPa HDT @ 1.81 MPa	84.5 - 102.6°C 65.4 - 88°C

Tg = Glass Transition Temperature

All Data provided is Preliminary data and must be verified by the individual user



Envisiontec GmbH: Brüsseler Str. 51 · 45968 Gladbeck · Germany
Fon: +49 2043/98 75-20 · Fax: +49 2043/98 75-99

Distributor

Envisiontec Inc.: 1100 Hilton Road · Ferndale, MI 48220 · USA
Phone: 1-248-582-0038 · Fax: 1-248-582-0039

www.envisiontec.com · info@envisiontec.de



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