



PRESIDIUM

REVO[®]THERM[®] RT2000
HIGH-STRENGTH POLYURETHANE

Technical Data Sheet

RT2000 is a two-component polyurethane with exceptional physical properties intended for structural applications. It is suitable for Closed Mold Injection processes (i.e. RIM, RTM, and Pultrusion). In some cases, the exceptional physical properties of RT2000 are strong enough to produce parts without any glass reinforcement, which can provide up to a 30% weight reduction. RevoTherm[®] has the stiffness of an epoxy, polyester, or vinyl ester but has the toughness and processability of a urethane.



Key Physical Properties *	Units	Nonreinforced	40% Glass Reinforced ²	40% Aramid Reinforced ³	40% Carbon Reinforced ⁴	Pultrusion 81% Glass
Specific Gravity ASTM D792		1.22	1.46	1.27	1.42	2.13
Durometer¹ ASTM D2240	Shore D	86	86	88	91	94
Glass Transition, Tg¹ ASTM D3418	°F (°C)	273 (134)	268 (131)			273 (134)
Flexural Modulus ASTM D790	psi (MPa)	460,000 (3,170)	1,385,000 (9,550)	2,571,660 (17,730)	3,891,360 (26,830)	8,194,630 (56,500)
Flexural Strength, Peak ASTM D790	psi (MPa)	20,595 (142)	50,040 (345)	42,350 (292)	80,930 (558)	236,410 (1,630)
Flexural Elongation @ Break ASTM D790	%	12.1	4.3	4.7	2.2	3.0
Tensile Modulus ASTM D638	psi (MPa)	472,000 (3,254)	1,630,000 (11,238)	2,264,900 (15,616)	2,504,800 (17,270)	2,219,070 Perp. (15,300 Perp.)
Tensile Strength, Peak ASTM D638	psi (MPa)	11,400 (77)	26,200 (181)	42,350 (334)	80,930 (364)	9,440 Perp. (65.1 Perp.)
Tensile Elongation @ Break ASTM D638	%	5.5	2.1	3.5	3.4	0.5 (Perp.)

* All samples were post-cured at 275F for 30 minutes to ensure full cure before testing. Post curing is not typically necessary in production. ¹ Internal Testing inquire for details. ² Six layers of glass fabric, 9oz or 305 g/m² 3 mm thick. ³ Six layers of carbon fabric 11oz or 373 g/m² 2.5 mm thick ⁴ Six layers of aramid fabric, 9oz or 305 g/m² 3 mm thick

APPLICATIONS	BENEFITS
<ul style="list-style-type: none"> • Automotive body panels • E.V. battery boxes • Structural foams • Wind turbine spar caps • Consumer and Industrial products 	<ul style="list-style-type: none"> • Excellent strength-to-weight • Extremely rigid without becoming brittle • High compression strength and tunable formulations • Compatible with all reinforcements including carbon fiber • No VOC's, faster line speeds, and less waste

The information on this sheet is a guide. The stated values reflect an average of several tests conducted on Presidium's goods. These values were obtained under ideal conditions and may not be replicated in any particular test, part, or application. Because the values achieved in actual parts depend considerably on part design, molding conditions, and testing methods, no guarantee is made or implied regarding values to be obtained in any specific test, part, or application. Presidium makes no warranty or representation as to the suitability of any of its goods for use in any application. Presidium relies on customer to conduct its own tests and judge for itself the suitability of Presidium's goods.

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