ColorRx® PSU-1000RX

Product Description PSU-1000RX is an injection molding grade of polysulfone (PSU) with high strength and excellent resistance to oxidation and hydrolysis. It is suitable for healthcare applications and sterilizable by EtO, steam, gamma and electron beam radiation.

Material Status Commercial: Active

Availability Africa & Middle East, Asia Pacific, Europe, Latin America, North America

Features Autoclave Sterilizable, Biocompatible, E-beam Sterilizable, Ethylene Oxide Sterilizable, Excellent Colorability, Heat Sterilizable, Radiation Sterilizable, Steam Sterilizable

Uses Engineering Parts, Medical/Healthcare Applications, Metal Replacement, Surgical Instruments

Forms Pellets

Processing Method Injection Molding

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.24	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	6.5	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.70	%	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2480	MPa	ASTM D638
Tensile Strength [2] (Yield)	68.9	MPa	ASTM D638
Tensile Elongation [2] (Break)	50 to 100	%	ASTM D638
Flexural Modulus [2]	2690	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	69	J/m	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 3.18 mm	174	°C	

Injection	Nominal Value	Unit
Drying Temperature	135 to 163	°C
Drying Time	4.0 to 6.0	hr
Drying Time, Maximum	24	hr
Suggested Shot Size	50 to 75	%
Rear Temperature	316 to 329	°C
Middle Temperature	316 to 329	°C
Front Temperature	316 to 329	°C

Properties provided are only typical values and Americhem assumes no liability for the customer's use of the information provided. The customer assumes all responsibility for testing determining this products suitability in the customer's specific end application.

Revision Date: 1/13/2025

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Injection	Nominal Value	Unit
Nozzle Temperature	316 to 329	°C
Processing (Melt) Temp	329 to 385	°C
Mold Temperature	121 to 163	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 51 mm/min

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