



Columbia Specialty Company, Inc.

Distributor of Mechanical and Industrial Piping Products

Phone: (562) 634-6425 Fax: (562) 408-2914

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Project: _____

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CPVC Physical Properties & ASTM Standards for Fittings

CPVC Schedule 80 Fittings

PHYSICAL PROPERTIES

Physical Property	Test Condition	Value	Reference
Specific Gravity	73° F	1.52	ASTM D-792
Rockwell Hardness (R)	73° F	121	ASTM D-785
Heat Deflection @ 264 psi	° F	212	ASTM D-645
Tensile Strength	73° F	8200	ASTM D-638
Tensile Modulus (psi)	73° F	430,00	ASTM D-638
Flexural Strength (psi)	73° F	15,000	ASTM D-790
Flexural Modulus (psi)	73° F	410,000	ASTM D-790
Izod Impact Ft. Lbs./ In. Notch	73° F	2	ASTM D-256
Water Absorption (24 hrs.)	73° F	+ .04	ASTM D-570
Coefficient of Expansion (*F), in./in./x 10		3.7	ASTM D-696
Flammability	.062"	V-0	UL-94
Cell Designation		23557B	ASTM D-1784

STANDARDS

ASTM F437

CPVC Scheduled 80 threaded fitting specifications

ANSI B2.1

Specifications for threaded fittings and pipe

ASTM F439

CPVC Schedule 80 socket fitting specifications

ANSI B16.1

Specifications for flange type fittings

ASTM F441

CPVC Schedule 80 pipe specifications

NSF14

Specifications for potable water and quality control standards

ASTM F493

CPVC Solvent Cements

ASTM D1784

Rigid CPVC Compounds



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PHYSICAL PROPERTIES

PVC SCHEDULE 80 TYPE I, GRADE I

Physical Property	Value	Reference
Specific Gravity +/- 0.02	1.40	ASTM D792
Tensile Strength, psi @ 73°F	7100	ASTM D638
Modulus of Elasticity in Tension, psi @ 73 °F	400,000	ASTM D638
Flexural Strength, psi	12,000 - 14,000	ASTM D790
Izod Impact, Ft. Lbs./in., Notch at 73°F	0.65	ASTM D256
Heat Deflection °F @ 264 psi	160	ASTM D648
Heat Resistance ° F	140	
Thermal Conductivity, BTU/hr./sq. Ft./°F/ in.	1	ASTM C177
Coefficient of Expansion, in./in./°F x 10	3.0	ASTM D696
Water Absorption. % 24 hrs. @ 73°F	0.05	ASTM D570
Cell Classification	12454B	ASTM D1784
Color Code	Dark Gray	

STANDARDS

ASTM D1784

Rigid PVC Compounds

ASTM D1785

PVC Schedule 80 pipe specifications

ASTM D2464

PVC Schedule 80 threaded fitting specifications

ASTM D2467

PVC Schedule 80 socket fitting specifications

ASTM D 2564

PVC Solvent Cements

ASTM D2855

Standard practice for solvent cemented Joints for PVC pipe and fittings

ANSI B2.1

Specifications for flange type fittings

ANSI B16.1

Specifications for flange type fittings

NSF 14

Specifications for potable water and quality control standards



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CPVC Physical Properties & ASTM Standards for Fittings

PHYSICAL PROPERTIES

PVC SCHEDULE 40 TYPE I, GRADE I

Physical Property	Value	Reference
Specific Gravity +/- 0.02	1.40	ASTM D792
Tensile Strength, psi @ 73°F	7100	ASTM D638
Modulus of Elasticity in Tension, psi @ 73 °F	400,000	ASTM D638
Flexural Strength, psi	12,000 - 14,000	ASTM D790
Izod Impact, Ft. Lbs./in., Notch at 73°F	0.65	ASTM D256
Heat Deflection °F @ 264 psi	160	ASTM D648
Heat Resistance ° F	140	
Thermal Conductivity, BTU/hr./sq. Ft./°F/ in.	1	ASTM C177
Coefficient of Expansion, in./in./°F x 10	3.0	ASTM D696
Water Absorption. % 24 hrs. @ 73°F	0.05	ASTM D570
Cell Classification	12454B	ASTM D1784
Color Code	White	

STANDARDS

ASTM D1784

Standard specifications for PVC Compounds

ASTM D1785

Standard specifications for PVC Schedule 40 pipe

ASTM D2466

Standard specifications for socket type PVC Schedule 40 plastic fittings

ASTM D2564

Standard specifications for PVC Solvent Cements

ASTM D2855

Standard specifications for making Solvent cemented joints with PVC pipe and fittings

NSF 14

Standard specifications for potable water and quality control