

PVC DUCT PHYSICAL PROPERTIES

Pipe/Duct & Fittings: PVC ASTM-D-1784, Cell Class 12454-B

<u>PROPERTY</u>	<u>VALUE</u>	<u>ASTM TEST METHOD</u>
<u>General</u>		
Cell Classification	12454	ASTM D1784
Maximum Service Temp.	140 ° F	
Color	Dark Gray	
Specific Gravity, (g/cu.cm@73° F)	1.40 ± 02	ASTM D792
Water Absorption % Increase 24 hrs. @ 25 ° C	0.05	ASTM D570
Hardness, Rockwell	110-120	ASTM D785
Poisson's Ratio @ 73° F	0.41	
Hazen-Williams Factor	C=150	
<u>Mechanical</u>		
Tensile Strength, psi @73° F	7,450	ASTM D638
Tensile Modulus of Elasticity, psi @ 73° F	420,000	ASTM D638
Flexural Strength, psi @ 73° F	14,450	ASTM D790
Flexural Modulus, psi @ 73° F	360,000	ASTM D790
Compressive Strength, psi @ 73° F	9,600	ASTM D695
Izod Impact, notched ft-lb/in @ 73° F	0.75	ASTM D256
<u>Thermal</u>		
Coefficient of Linear Expansion (in/in/ °F)	2.9 x 10 ⁻⁵	ASTM D696
Coefficient of Thermal Conductivity (Cal.)(cm ² (Sec.)(°C)	3.5 x 10 ⁻⁴	
BTU/in/hr/ft ² /°F	1.02	ASTM C177
Watt/m K	0.147	
Annealed)	170	ASTM D648
Specific Heat, Cal./ C/gm (BTU/lb/°F)	0.25	ASTM D2766
<u>Electrical</u>		
Dielectric Strength, volt/mil	1.43	ASTM D149
Dielectric Constant, 60Hz, 30°F	3.7	ASTM D150
Volume Resistivity, ohm/cm @ 95° C	1.2 x 10 ¹²	ASTM D257
Pipe is non-electrolytic		
<u>Fire Performance</u>		
Flammability Rating	V-0	UL-94
Flame Spread Index	<10	ASTM E162
Smoke Generation	80-225	ULC
Flash Ignition Temp.	730° F	
Average Time of Burning (sec.)	<5	ASTM D635
Average Extent of Burning (mm)	<10	ASTM D635
Burning Rate (in/min)	Extinguishing	
Softening Starts (approx.)	250° F	
Material Becomes Viscous	350° F	
Material Carbonizes	450° F	