

Mitsubishi Chemical Advanced Materials CPVC - ASTM D1748, Cell Classification (ASTM Product Data Sheet)
Categories: Polymer; Thermoplastic; Vinyl (PVC); Chlorinated PVC (CPVC)

Material Notes: Quadrant Engineering Plastic Products is now Mitsubishi Chemical Advanced Materials.

Physical Properties	Metric	English	Comments
Specific Gravity	1.56 g/cc	1.56 g/cc	ASTM D792
Water Absorption	<= 0.040 %	<= 0.040 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	<= 0.040 %	<= 0.040 %	Immersion; ASTM D570(2)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	84	84	ASTM D2240
Tensile Strength	42.4 MPa	6150 psi	ASTM D638
Tensile Strength at 65°C (150°F)	3.45 MPa	500 psi	ASTM D638
Elongation at Break	12 %	12 %	ASTM D638
Tensile Modulus	1.79 GPa	260 ksi	ASTM D638
Flexural Strength	46.2 MPa	6700 psi	ASTM D790
Flexural Modulus	2.68 GPa	388 ksi	ASTM D790
Compressive Strength	96.5 MPa	14000 psi	10% Def.; ASTM D695
Compressive Modulus	2.41 GPa	350 ksi	ASTM D695
Izod Impact, Notched	1.71 J/cm	3.20 ft-lb/in	ASTM D256 Type A

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	>= 1.00e+12 ohm	>= 1.00e+12 ohm	ASTM D257

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	93.3 °C	200 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	46.7 °C	116 °F	ASTM D648
Flammability, UL94	V-0 @Thickness 3.17 mm	V-0 @Thickness 0.125 in	Estimated Rating

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
Canada AG	No	No	
FDA	No	No	
NSF	Yes	Yes	STD 14 & 61
USDA	No	No	
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Limited	Limited	
Acids, Weak	Acceptable	Acceptable	
Alcohols	Acceptable	Acceptable	
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable	
Alkalies, Weak	Acceptable	Acceptable	
Chlorinated Solvents	Limited	Limited	
Conductive / Static Dissipative	Yes	Yes	
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Limited	Limited	
Hydrocarbons - Aliphatic	Limited	Limited	
Hydrocarbons - Aromatic	Limited	Limited	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Unacceptable	Unacceptable	

Descriptive Properties			
Color		Grey	
Machinability		6	1-10, 1=Easier to Machine