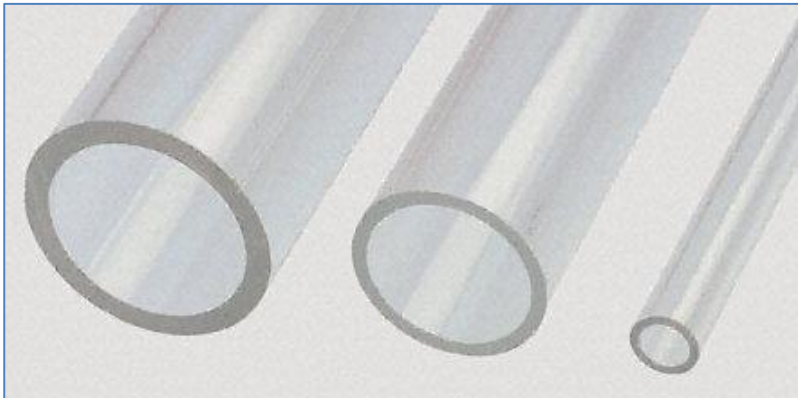


# Datasheet

## Acrylic Tube

RS Stock number [282-2234](#)



### Description:

Extruded thermoplastic acrylic tubes with excellent optical properties.  
 Good resistance to most inorganic chemicals, oils, dilute acids/alkalis and weathering.

### Mechanical Properties:

Density:	1.18 g/cm <sup>3</sup>
Impact Strength (standard small test specimen):	12 kJ/m <sup>2</sup>
Notched Impact Strength (standard small test specimen):	2 kJ/m <sup>2</sup>
Tensile Strength (1/1 test specimen 3; V = 5 mm/min):	72 N/mm <sup>2</sup>
Elongation at break (1/1 test specimen 3; V = 5 mm/min):	4.5 %
Flexure Strength (test specimen 80 x 10 x 4 mm):	105 N/mm <sup>2</sup>
Compressive Yield Stress:	103 N/mm <sup>2</sup>
Modulus of elasticity:	3300 N/mm <sup>2</sup>
Dynamic shear modulus at c. 10 Hz:	1700 N/mm <sup>2</sup>
Indentation hardness brinell H <sub>961/30</sub> :	190 N/mm <sup>2</sup>

**Optical Properties:**

Transmittance of 3 mm thick material in visible range:	~ 92
Refractive Index $n_D^{20}$ :	1491

**Thermal Properties:**

Coefficient of linear thermal expansion (0...50 °C):	$70 - 10^{-6} 1/^\circ\text{C}$
Thermal Conductivity:	0.19 W/m <sup>0</sup> C
U-value (Thickness 3 mm):	5.6 W/m <sup>0</sup> C
U-value (Thickness 5 mm):	5.3 W/m <sup>0</sup> C
U-value (Thickness 10 mm):	4.4 W/m <sup>0</sup> C
Forming Temperature (oven temperature):	~ 150 °C
Demoulding Temperature:	> 80 °C
Maximum continuous service temperature:	70 °C
Vicat softening temperature Model B:	102 °C
Heat distortion temperature ISO 75, deflection 1.80 N/mm <sup>2</sup> :	90 °C
Dimensional stability under heat acc. To Martens method:	85 °C
Flammability rating:	HB

**Electrical Properties:**

Volume resistivity:	> 10 <sup>15</sup> Ωcm
Surface resistance:	5 – 10 <sup>13</sup> Ω
Dielectric Strength (test specimen thick 1 mm):	~ 30 kV/mm
Dielectric constant (at 50 Hz):	3.6
Dielectric constant (at 0.1 MHz):	2.7
Dissipation factor (at 50 Hz):	0.06
Dissipation factor (at 0.1 MHz):	0.02
Tracking resistance:	KC > 600

**Behaviour towards water:**

Water absorption in weight gain after 24 hrs immersion:	0.3 %
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**Physical Properties:**

Hardness:	M90 Rockwell
Inner Diameter:	4 mm
Length:	1000 mm
Outer Diameter:	6 mm
Material:	Acrylic