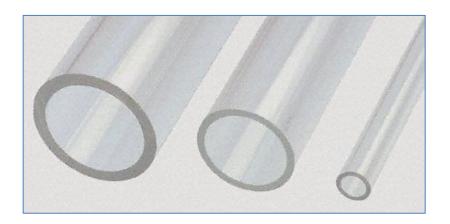




# Datasheet Acrylic Tube

RS Stock number 282-2284



#### **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 Yeald 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>



# ENGLISH

# **Optical Properties:**

Transmittance of 3 mm thick material in visible range:	~ 92
Refractive Index n <sup>20</sup> <sub>D</sub> :	1491

# **Thermal Properties:**

Coefficient of linear thermal expansion (050 °C):	70 - 10 <sup>-6</sup> 1/ <sup>0</sup> 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:	НВ

# **Electrical Properties:**

Volume resistivity:	> 10 <sup>15</sup> Ωcm
Surface resistance:	$5 - 10^{13}  \Omega$
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 %

# **Physical Properties:**

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