



**Acriglas® CELL CAST ACRYLIC SHEET
PHYSICAL AND MECHANICAL PROPERTIES**

| PROPERTY | TYPICAL VALUE (1) | TEST METHOD |
|---|----------------------|-------------|
| Specific Gravity | 1.18 | ASTM D792 |
| OPTICAL | | |
| Optical Refractive Index | 1.49 | ASTM D542 |
| Haze (%) | 2.0 MAX. | ASTM D542 |
| Light Transmission (%) | | |
| 0.100" 0.197" | 92 | ASTM 1003 |
| 0.220" 0.472" | 90 | ASTM 1003 |
| MECHANICAL | | |
| Tensile Strength (psi) | 9600 | ASTM D638 |
| Elongation at Rupture (%) | 4.5 | ASTM D638 |
| Modulus of Elasticity (psi) | 425,000 | ASTM D798 |
| Impact Strength(ft lb/in) | 0.4 -0.5 | ASTM 256 |
| Izod Milled Notch | | |
| Flexural Strength (psi) | 15000 16000 | ASTM D798 |
| Compressive Strength (yield) | 18000 psi | ASTM D 695 |
| Shear Strength | 9000 psi | ASTM D 732 |
| Rockwell Hardness | M95 | ASTM D 785 |
| Barcol Hardness | 50 | ASTM D 2583 |
| Residual Shrinkage (Internal Strain) | 2% | ASTM D 702 |
| THERMAL | | |
| Forming Temperature(°C) | 140 180 | |
| (°F) | 284 356 | |
| Deflection Temperature(°C) | 91 | ASTM 648 |
| Under Load (264 psi) (°F) | 196 | ASTM 648 |
| Maximum recommended(°C) | 80 | - |
| continuous service temp(°F) | 176 | - |
| Vicat softening point (°C) | 115 | ASTM D 1525 |
| (°F) | 239 | |
| Coefficient of Linear Thermal Expansion | | |
| .000034 in/in-°F | ASTM D 696 | |
| Coefficient of Thermal Conductivity (k-Factor) | | |
| 1.3 BTU/(HR)(sq ft)(°F/in) | CENCO-FITCH | |
| Flammability (Burning Rate 3mm Thickness) | | |
| 1.0 in/min. (25 mm/min.) | ASTM D | |
| Self Ignition Temperature | 910°F (490°C) | ASTM D 1929 |
| Specific Heat @ 77°F | 0.35 BTU/(lb)(°F) | - |
| Smoke Density Rating | 10% | ASTM D 2843 |
| ELECTRICAL | | |
| Dielectric Strength Short Time (0.125" thickness) | | |
| 430 volts/mil (17KV/mm) | ASTM D 149 | |
| Dielectric Constant | | |
| 60 Hertz | 3.5 | ASTM D 150 |
| 1,000 Hertz | 3.2 | |
| 1,000,000 Hertz | 2.7 | |
| Dissipation Factor | | |
| 60 Hertz | 0.06 | ASTM D 150 |
| 1,000 Hertz | 0.04 | |
| 1,000,000 | 0.02 | |
| Volume Resistivity | 1.6 X 10(16th)ohm-cm | ASTM D 257 |
| Surface Resistivity | 1.9 X 10(15th) ohms | ASTM D 257 |
| MISCELLANEOUS | | |
| Water absorption(%) (24 hrs. C 23°C73°F) | 0.2 0.3% | ASTM 570 |
| Odor | None | - |
| Taste | None | - |

(1) All values referred to 3.0 mm (0.118") acrylic sheet. These values are typical and should not be taken as specifications.