

**Data Sheet – Opal Polycarbonate Sheet**

| Property                         | Test Method | Conditions   | Units             | Value                            |
|----------------------------------|-------------|--------------|-------------------|----------------------------------|
| <b>Physical</b>                  |             |              |                   |                                  |
| Relative density                 | ISO 1183    |              | g/cm <sup>3</sup> | 1.2                              |
| Water absorption                 | ISO 62      | 24 hr @ 23°C | %                 | 0.2                              |
| <b>Mechanical</b>                |             |              |                   |                                  |
| Tensile strength at yield        | ASTM D-638  | 10mm/min     | MPa               | 65                               |
| Tensile strength at break        | ASTM D-638  | 10mm/min     | MPa               | 60                               |
| Elongation at yield              | ASTM D-638  | 10mm/min     | %                 | 6                                |
| Elongation at break              | ASTM D-638  | 10mm/min     | %                 | >90                              |
| Tensile modulus of elasticity    | ASTM D-638  | 10mm/min     | MPa               | 2,300                            |
| Flexural modulus                 | ASTM D-790  | 1.3mm/min    | MPa               | 2,600                            |
| Flexural strength at yield       | ASTM D-790  | 1.3mm/min    | MPa               | 65                               |
| Izod impact strength             | ASTM D-256  | notched      | J/m               | 800                              |
| Charpy impact strength           | ASTM D-256  | notched      | J/m               | 800                              |
| Impact falling weight            | ISO 6603    | 3mm sheet    | J                 | 158                              |
| Rockwell hardness                | ASTM D-785  |              | R scale           | 125                              |
| <b>Thermal</b>                   |             |              |                   |                                  |
| Service temperature              |             |              | °C                | -50 to + 100                     |
| Heat distortion temperature      | ASTM D-648  | Load: 1.82MP | °C                | 130                              |
| Vicat softening temperature      | ASTM D-1525 | Load: 1kg    | °C                | 150                              |
| Coefficient of thermal expansion | ASTM D-696  |              | mm/m°C            | 0.065                            |
| Thermal conductivity             | C-177       |              | W/m°C             | 0.21                             |
| Specific heat capacity           | C-351       |              | kJ/kg°C           | 1.26                             |
| <b>Optical</b>                   |             |              |                   |                                  |
| Light transmission               | ASTM D-1003 |              | %                 | 2mm - 39<br>3mm - 50<br>5mm - 14 |
| Refractive index                 | ASTM D-542  |              |                   | 1.586                            |
| Yellowness Index                 | ASTM D-1925 |              |                   | < 1                              |
| Haze                             | ASTM D-1003 |              | %                 | < 0.5                            |
| <b>Electrical</b>                |             |              |                   |                                  |
| Dielectric strength              | ASTM D-149  | 500V/s       | kV/mm-1           | > 30                             |
| Surface resistivity              | ASTM D-257  | Keithley     | Ω                 | 5.1x10 <sup>5</sup>              |
| <b>Flammability</b>              |             |              |                   |                                  |
| EN13501                          |             |              |                   | B,s1,d0                          |
| BS 476 Part 7                    |             |              |                   | Class 1                          |
| UL Classified                    |             |              |                   | V2 (File e221255)                |
| NSP 92501,4                      |             |              |                   | M2                               |
| DIN 4102                         |             |              |                   | B1, B2                           |
| ASTM D-635                       |             |              |                   | CC1                              |