

## POLYCARBONATE (PC) SOLID SHEET

| GENERAL PROPERTIES                                            |  | CONDITIONS       | TEST METHOD                    | UNIT             | VALUE                            |
|---------------------------------------------------------------|--|------------------|--------------------------------|------------------|----------------------------------|
| Density                                                       |  |                  | ISO 1183                       | gr/cm³           | 1,2                              |
| Water Absorption Saturation Water (24h)                       |  | 23 °C            | ISO 62                         | %                | 0,30                             |
| Water Absorption Equilibrium                                  |  | 23 °C / 50% RH   | ISO 62                         | %                | 0,12                             |
| Maximum Continuous Operating Temp.                            |  |                  |                                | °C               | 120                              |
| MECHANICAL PROPERTIES                                         |  |                  |                                |                  |                                  |
| Tensile modulus                                               |  | 23 °C            | ISO 527-2                      | MPa              | 2350                             |
| Yield stress                                                  |  | 23 °C            | ISO 527-2                      | MPa              | 65                               |
| Yield strain                                                  |  | 23 °C            | ISO 527-2                      | %                | 6,3                              |
| Nominal strain at break                                       |  | 23 °C            | ISO 527-2                      | %                | > 50                             |
| Stress at break                                               |  | 23 °C            | ISO 527-2                      | MPa              | 70                               |
| Strain at break                                               |  | 23 °C            | ISO 527-2                      | %                | 120                              |
| Charpy impact strength                                        |  | 23 °C            | ISO 179                        | kJ/m²            | No Break                         |
| THERMAL PROPERTIES                                            |  |                  |                                |                  |                                  |
| Vicat Softening Temperature                                   |  | 50 N             | ISO 306                        | °C               | 148                              |
| Thermal conductivity                                          |  | 23 °C            | ISO 8302                       | W/(mK)           | 0,2                              |
| Coefficient of linear thermal expansion, parallel 23 to 55 °C |  |                  | ISO 11359-1                    | mm/m °C          | 0,065                            |
| Temperature of deflection under load                          |  | 1.80 MPa         | ISO 75-1,-2                    | °C               | 128                              |
| Temperature of deflection under load                          |  | 0.45 MPa         | ISO 75-1,-2                    | °C               | 140                              |
| OPTICAL PROPERTIES                                            |  |                  |                                |                  |                                  |
| Light Transmission (Clear)                                    |  |                  | ASTM D1003                     | %                | 89                               |
| Haze (Clear)                                                  |  |                  | ASTM D1044                     | %                | < 0,5                            |
| Refractive Index                                              |  |                  | ISO 489                        |                  | 1,586                            |
| ELECTRICAL PROPERTIES                                         |  |                  |                                |                  |                                  |
| Volume resistivity                                            |  |                  | IEC 60093                      | Ohm.cm           | 10 <sup>14</sup>                 |
| Electric strength                                             |  |                  | IEC 60243-1                    | kV/mm            | 3,1                              |
| Surface resistivity                                           |  |                  | IEC 60093                      | Ohm              | 10 <sup>16</sup>                 |
| Dissipation Factor                                            |  | 100 Hz           | IEC 60250                      | 10 <sup>-4</sup> | 5                                |
| FLAMMABILITY                                                  |  |                  |                                |                  |                                  |
| Fire Rating                                                   |  |                  | UL94                           |                  | t < 10mm - V2<br>t ≥ 10mm - V0   |
|                                                               |  |                  | EN 13501-1                     |                  | t < 8mm - B s1 d0<br>t ≥ 8mm - E |
|                                                               |  |                  |                                |                  |                                  |
| DIMENSIONS                                                    |  |                  |                                |                  |                                  |
| Thickness                                                     |  | 1 - 15 mm        |                                |                  |                                  |
| Width                                                         |  | 1220 and 2050 mm | (Depends on customer requests) |                  |                                  |
| Length                                                        |  | 2440 and 3050 mm | (Depends on customer requests) |                  |                                  |

\* POLICAM PC Solid sheets have certification of EN ISO 11963 standard.

## POLYCARBONATE (PC) SOLID SHEET

### PROPERTIES

- Very high impact resistance
- Up to 89% light transmission
- Good thermoforming capabilities
- Outstanding weatherability
- Easy to fabricate
- Good resistance to dilute acids and mineral oils

### APPLICATION AREAS

- Building windows
- Light-transmitting roof cover
- Sound Barriers
- Safety applications such as force shields, safety glasses, helmet visors
- Lighting

### COLORS AND % LIGHT TRANSMITTANCE VALUES (ASTM D1003)

| THICKNESS (mm) | CLEAR | WHITE | OPAL  | BRONZE   | BLUE     | FUME    |
|----------------|-------|-------|-------|----------|----------|---------|
| 1              | 89    | -     | -     | 20       | -        | -       |
| 1,5            | 88    | 30    | 60    | 20       | -        | -       |
| 2              | 88    | 30    | 58    | 20/50    | -        | -       |
| 3              | 87    | 30    | 38/58 | 20/50    | 10       | -       |
| 4              | 87    | 30    | 53    | 20/50    | 26/42    | 35/47   |
| 5              | 86    | 25    | 50    | 16/20/50 | 42       | 7       |
| 6              | 85    | 25    | 50    | 16/20/50 | 26/42    | 8/23/50 |
| 7              | 84    | 20    | -     | -        | -        | -       |
| 8              | 84    | 20    | 60    | 14/50    | 25/32/42 | -       |
| 9              | 83    | 15    | -     | -        | -        | -       |
| 10             | 82    | 15    | 34/60 | 14/50    | 32/44    | 35      |
| 12             | 81    | -     | -     | 50       | 32       | -       |
| 15             | 79    | -     | -     | 46       | -        | -       |

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