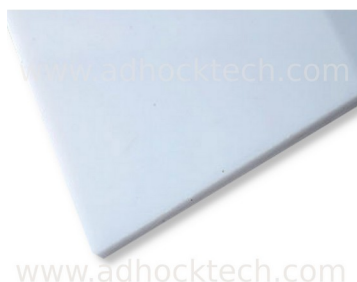


## PC

### Polycarbonate

The polycarbonates resistant to mineral acids, aliphatic hydrocarbons, gasoline, greases, oils, alcohols except methyl alcohol and water below 70°C.

Above this temperature the water attacks the polymer favoring a gradual chemical decomposition. The mechanical properties, such as elongation, tensile strength, resistance to impact and flexion, are combined with a high toughness which makes this compound very useful in the industrial field. The transparency and the absence of color allow a light permeability of 89% in the visible spectrum. The UV are absorbed and cause yellowing, such as atmospheric agents wear out the surface thereof. The transparency of polycarbonate, combined with the mechanical properties, makes it the natural replacement of the glass. The polycarbonates highly crystalline melt at approximately 260°C and are less soluble than amorphous, have a high capacity to concentrate the light and are used to produce the lenses. By contrast exhibit the problem of having a surface tender and scratched. Technical details: Raw material Polycarbonate (PC); Specific gravity: 1.20



#### MECHANICAL PROPERTIES

| Temperature of use | Density | Yield Stress | Breakdown Voltage | Modulus of elasticity (tension) | Modulus of elasticity (tension) | Modulus of elasticity (bending) | Hardness Test | Breaking Strength | Resistance Elongation | Wear Creep |
|--------------------|---------|--------------|-------------------|---------------------------------|---------------------------------|---------------------------------|---------------|-------------------|-----------------------|------------|
| C°                 | g/cm³   | Mpa          | Mpa               | %                               | MPa                             | MPa                             | MPa           | MPa               | μ/km                  |            |
| 120                | 1,2     | 60           |                   |                                 | 2300                            |                                 | 100           | 48                | 18                    |            |

#### THERMAL PROPERTIES

| Melting Temperature | Glass Transition Temperature | Hot Dimensional Stability (met. A) | Hot Dimensional Stability (met. B) | Use Temperature Limit | Thermal Conductivity | Heat Capacity | Coefficient of Thermal Expansion |
|---------------------|------------------------------|------------------------------------|------------------------------------|-----------------------|----------------------|---------------|----------------------------------|
| C°                  | C°                           | C°                                 | C°                                 | C°                    | W/K.m                | J/K.m         | 10 1/K                           |
|                     | 148                          | 135                                | 140                                | 140                   | 0,19                 | 1,2           | 7                                |

#### ELECTRICAL PROPERTIES

| Constant Dielectric | Dielectric Loss Factor | Specific Bulk Resistivity | Surface Resistivity | Rigidity Dielectric | Resistance to Leakage Current |
|---------------------|------------------------|---------------------------|---------------------|---------------------|-------------------------------|
| abs                 | Tan δ                  | Ω.cm                      | Ω                   | kV/mm               | class                         |
| 3                   | 0,006                  | 10 <sup>13</sup>          | 10 <sup>15</sup>    | 27                  | KA 1                          |

#### VARIOUS PROPERTIES

| Moisture Absorption | Water Absorption until Saturation | Specific Bulk Resistivity |
|---------------------|-----------------------------------|---------------------------|
| %                   | %                                 |                           |
| 0,2                 | 0,2                               | VO                        |