

# MULTICLEAR® STRONG

MULTICLEAR® STRONG is an range of extruded multiwall polycarbonate sheet specifically designed to offer increased stiffness allowing cost saving by using less glazing bars for installations hence increased light transmittance.

MULTICLEAR® STRONG is transparent and translucent with one side UV protected sheet (also available with two side UV protection). Standard colours are clear, opal and bronze. Available in thicknesses 10, 16, 20 and 25 mm. Lower weight products are available for 16 and 25 mm.

Knife cutting operation is used both online and offline to avoid saw dust.

MULTICLEAR® STRONG has a 10 year limited warranty against discolouration, loss of impact strength and light transmission due to weathering.

**ALSO AVAILABLE:**

MULTICLEAR® HAMMER FINISH, MULTICLEAR® SOLAR CONTROL (UV protected), MULTICLEAR® RPC.

**EXCELLENT FIRE PERFORMANCE** complying requirements to EN 13501-1 (EUROPEAN BUILDING STD). In case of fire, the sheet will melt and allow venting where heat and smoke will be let out and therefore reduce the growth of fire by flame spread.

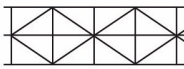
**MULTICLEAR® STRONG BENEFITS:**

- High light transmission
- Excellent bending radius
- Cross structure offering greater stiffness
- Good thermal insulation

**APPLICATION AREAS:**

Building industry – roofing, cladding, sidewalls, conservatories, domes, skylights, sheds, car ports, smoke vents, swimming pool covers, suspended ceilings, glasshouses, shopping centre roofing, railway/metro station, stadia roofing and partitions. Lighting/package lamp optics and neon signs boxes, pallet shields, protective covers for fragile items. Advertising illuminated signs and advertising panels. Agriculture greenhouses, lorry/tractor ports and farm/barn buildings.

## MULTICLEAR® STRONG TECHNICAL SPECIFICATIONS

| MULTICLEAR®<br>STRONG   | Thickness<br>mm | Step<br>mm | Weight<br>g/m <sup>2</sup> | K-Value<br>W/m <sup>2</sup> K | Width mm |      |      |     | UV<br>Side | Colour |        |
|---|-----------------|------------|----------------------------|-------------------------------|----------|------|------|-----|------------|--------|--------|
|   |                 |            |                            |                               | 2100     | 1250 | 1200 | 980 |            | Opal   | Bronze |
|  | 8               | 10         | 1600                       | 3,0                           | ☑        | ☑    | ☑    | ☑   | 1(2)       | ☑      | ☑      |
|   | 10              | 10         | 1700                       | 2,5                           | ☑        | ☑    | ☑    | ☑   | 1(2)       | ☑      | ☑      |
|   | 16              | 10         | 2700                       | 2,0                           | ☑        | ☑    | ☑    | ☑   | 1(2)       | ☑      | ☑      |
|   | 20              | 10         | 3000                       | 1,8                           | ☑        | ☑    | ☑    | ☑   | 1(2)       | ☑      | ☑      |
|   | 25              | 10         | 3400                       | 1,6                           | ☑        | ☑    | ☑    | ☑   | 1(2)       | ☑      | ☑      |

| Property   | Value   | Unit                               | Standard   |
|--|---------|------------------------------------|------------|
| <b>Physical properties</b>                                   |         |                                    |            |
| Density  | 1,2     | g/cm <sup>3</sup>                  | ISO 1183   |
| Refractive index (20 °C)                                     | 1,586   |                                    | ISO 489    |
| Moisture absorption 24 hours, 23 °C, 50% RH                  | 0,15    | %                                  |            |
| <b>Mechanical properties</b>                                 |         |                                    |            |
| Tensile strength at yield (at break)                         | 63 (70) | N/mm <sup>2</sup>                  | ISO 527    |
| Elongation at yield (at break)                               | 6 (110) | %                                  | ISO 527    |
| Elastic modulus  | 2300    | N/mm <sup>2</sup>                  | ISO 527    |
| Flexural modulus   | 2300    | N/mm <sup>2</sup>                  | ISO 178    |
| Charpy unnotched impact strength +23 °C                      | NB      | kJ/m <sup>2</sup>                  | ISO 179/2D |
| Charpy unnotched impact strength -40 °C                      | NB      | kJ/m <sup>2</sup>                  | ISO 179/2D |
| Izod notched impact strength +23 °C                          | 65      | kJ/m <sup>2</sup>                  | ISO 180/1A |
| Izod notched impact strength -30 °C                          | 10      | kJ/m <sup>2</sup>                  | ISO 180/1A |
| Rockwell hardness  | M70     |                                    | ISO 2039-2 |
| <b>Thermal properties</b>                                    |         |                                    |            |
| Linear coefficient of thermal expansion (23-80 °C)           | 0,7     | 10 <sup>-4</sup> x K <sup>-1</sup> |            |
| Heat deflection temperature, HDT A (1,80 N/mm <sup>2</sup> ) | 132     | °C                                 | ISO 75     |
| Heat deflection temperature, HDT B (0,45 N/mm <sup>2</sup> ) | 142     | °C                                 | ISO 75     |
| Vicat temperature VST/B 120                                  | 149     | °C                                 | ISO 306    |
| Vicat temperature VST/B 50                                   | 148     | °C                                 | ISO 306    |
| Specific heat capacity, Cp                                   | 1,17    | kJ/kg.K                            |            |
| Thermal conductivity   | 0,21    | W/m.K                              | DIN 52612  |

Properties reported here are typical values. Arla Plast makes no representation that the material in any particular shipment will conform exactly to the values given. The above information is based upon experience and given in good faith. Due to many factors which are outside our knowledge and control, no warranty is given or is to be implied with respect to such information. Detailed product specification and technical manual/information is available on request.