



MAKROCLEAR™ FA

MAKROCLEAR™ FA is transparent polycarbonate sheet. The product has high clarity and surface quality ideal to replace Glass in food contact applications. The product is virtually unbreakable with extremely high impact resistance and offers high temperature performance too.

MAKROCLEAR™ FA provides designers with possibilities to use transparent polycarbonate sheets in applications where high clarity and optical performance is required. The consistent high quality demands from the market helps to improve machining, screen printability and thermoformability

MAKROCLEAR™ FA is an extruded polycarbonate sheet made from a special resin complying with food contact regulations governed by the US Food and Drug Administration and EC Directive. Sawing and forming can be performed by using the same methods as for standard polycarbonate.

MAKROCLEAR™ FA BENEFITS:

- Food approval
- Resistance to high temperature
- Half the weight of glass
- High impact strength
- Easy to thermoform or fabricate

APPLICATION AREAS:

MAKROCLEAR™ FA is the right choice for food packaging and applications where the product will come in direct contact with food, such as displays and boxes.

DELIVERY PROGRAM:

Standard size: 2050 x 3050 mm

Thickness range: 0,8 – 8 mm

Colour: Clear

Embossing: ICE™, TEX™, Grain 35, ANTI-REFLEX™

Special sizes and thicknesses on request

MAKROCLEAR™ FA TECHNICAL SPECIFICATIONS

| Property | Value | Unit | Standard |
|--|---------------------|-------------------|-------------|
| Physical properties | | | |
| Density | 1,2 | g/cm ³ | ISO 1183 |
| Refractive index (20 °C) | 1,586 | | ISO 489 |
| Moisture absorption 24 hours, 23 °C, 50% RH | 0,15 | % | ISO 62 |
| Mechanical properties | | | |
| Tensile strength at yield (at break) | 60 (70) | N/mm ² | ISO 527 |
| Elongation at yield (at break) | 6 (110) | % | ISO 527 |
| Elastic modulus | >2300 | N/mm ² | ISO 527 |
| Flexural modulus | >2300 | N/mm ² | ISO 178 |
| Charpy unnotched impact strength -40 °C | NB | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength -30 °C | 11 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength +23 °C | 65 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength -30 °C | 10 | kJ/m ² | ISO 180/1A |
| Thermal properties | | | |
| Linear coefficient of thermal expansion (20-70 °C) | 65x10 ⁻⁶ | K ⁻¹ | ISO 11359-2 |
| Heat deflection temperature, HDT A (1,80 N/mm ²) | 132 | °C | ISO 75 |
| Heat deflection temperature, HDT B (0,45 N/mm ²) | 142 | °C | ISO 75 |
| Vicat temperature VST/B 120 | 149 | °C | ISO 306 |
| Vicat temperature VST/B 50 | 148 | °C | ISO 306 |
| Thermal conductivity | 0,20 | W/m.K | DIN 8302 |
| Electrical properties | | | |
| Volume resistivity, dry | >10 ¹⁴ | Ω . m | IEC 62631 |
| Surface resistivity, dry | 10 ¹⁶ | Ω | IEC 62631 |
| Dielectric strength, dry | 30 | kV/mm | IEC 60243 |
| Dielectric constant, dry 50 Hz | 3 | | IEC 62631 |
| Dielectric constant, dry 1 MHz | 2,9 | | IEC 62631 |
| Dissipation factor (tan δ), dry 50 Hz | 0,001 | | IEC 62631 |
| Dissipation factor (tan δ), dry 1 MHz | 0,01 | | IEC 62631 |

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.