

PLEXIGLAS® Heatresist hw55 clear

Product Profile:

PLEXIGLAS® Heatresist hw55 clear is a copolymer based on methyl methacrylate (MMA) with comonomer constituents.

Besides showing the familiar properties of standard PLEXIGLAS® molding compound, such as

- high light transmission,
- good flowability,
- high mechanical strength, surface hardness and abrasion resistance, as well as
- excellent weatherability,

PLEXIGLAS® Heatresist hw55 clear offers the additional benefits of

- increased heat deflection temperature under load and
- improved resistance to stress cacking
- optimised inherent color,
- AMECA listing.

Application:

PLEXIGLAS® Heatresist hw55 clear is particularly suitable for injection molding of technical items.

Examples:

lighted keys, luminaire covers, fiber optics.

Processing:

PLEXIGLAS® Heatresist hw55 clear can be processed on injection molding machines with 3-zone general purpose screws for thermoplastics.

Physical Form / Packaging:

PLEXIGLAS® Heatresist hw55 is supplied as pellets of uniform size, packaged in two-ply, 25kg polyethylene bags; other packaging on request.

For more information:

For more information, e.g. Charts or lists of resistance are in the database CAMPUS® (<http://www.campusplastics.com>) free of charge.

Properties:

| | Parameter | Unit | Standard | PLEXIGLAS® Heatresist hw55 clear |
|------------------------------------------|---------------|------------------------|-------------|----------------------------------|
| Mechanical Properties | | | | |
| Tensile Modulus | 1 mm/min | MPa | ISO 527 | 3600 |
| Stress @ Break | 5 mm/min | MPa | ISO 527 | 80 |
| Strain @ Break | 5 mm/min | % | ISO 527 | 3.5 |
| Charpy Impact Strength | 23°C | kJ/m ² | ISO 179/1eU | 20 |
| Thermal Properties | | | | |
| Vicat Softening Temperature | B / 50 | °C | ISO 306 | 119 |
| Glass Transition Temperature | | °C | ISO 11357 | 122 |
| Temp. of Deflection under Load | 0.45 MPa | °C | ISO 75 | 109 |
| Temp. of Deflection under Load | 1.8 MPa | °C | ISO 75 | 106 |
| Coeff. of Linear Therm. Expansion | 0 – 50°C | E-5 /°K | ISO 11359 | 7 |
| Flammability UL 94 | 1.6 mm | Class | IEC 707 | HB |
| Rheological Properties | | | | |
| Melt Volume Rate, MVR | 230°C / 3.8kg | cm ³ /10min | ISO 1133 | 1.2 |
| Optical Properties | | | | |
| Luminous transmittance | d=3 mm | | | |
| Luminous transmittance | D65 | % | ISO 13468-2 | 90 |
| Refractive Index | | | ISO 489 | 1.51 |
| Other Properties | | | | |
| Density | | g/cm ³ | ISO 1183 | 1.19 |
| Water Absorption in Water | | % | ISO 62 | 2.2 |
| Humidity Absorption | 23°C / 50% | % | ISO 62 | 0.6 |
| Recommended Processing Conditions | | | | |
| Predrying Temperature | | °C | | max. 109 |
| Predrying Time in Desiccant-Type Drier | | h | | 2 – 3 |
| Melt Temperature | | °C | | 220 – 250 |
| Mold Temperature (Injection Molding) | | °C | | 60 – 90 |

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

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