Product Information

# PLEXIGLAS® Resist AG 100

## Product Profile

PLEXIGLAS® Resist AG 100 is an amorphous thermoplastic molding compound, based on impact-modified polymethyl methacrylate (PMMA).

## Properties

PLEXIGLAS® molding compounds have the following typical properties:

- high weather resistance
- excellent transmission and clarity
- brilliant appearance
- low weight
- 100% recyclable
- pleasant feel and sound of molded parts

PLEXIGLAS® Resist AG 100 is characterized by the following additional properties:

- highest breaking strength and impact strength
- improved resistance to stress cracking
- balanced property profile
- clear reduction of reversible haze at very high and low temperatures
- increased heat deflection temperature under load
- AMECA listing, CAMPUS and moldflow data available

## Application

PLEXIGLAS® Resist AG 100 has a balanced property profile and is used for extruding and coextruding sheets and profiles as well as for injection molding.

## Processing

PLEXIGLAS® Resist AG 100 can be processed by injection molding of parts or by sheet extrusion and coextrusion. PLEXIGLAS® Resist AG 100 can be injection-molded on processing machines with a standard three-section screw for engineering thermoplastics in one-component or two-component processes.

## Physical form and packaging

PLEXIGLAS® Resist molding compounds are supplied as pellets of uniform size in 25kg polyethylene bags or 500kg boxes with PE lining. Other types of packaging are available on request.

## Sustainability

From production to recycling, the environmental impact of PLEXIGLAS® was tested in the life cycle assessment in accordance with ISO 14040ff and received a positive rating. In addition to its durability, PLEXIGLAS® offers convincing recyclability. It can be completely recycled by chemical conversion to its starting materials or directly reused.

## Typical values

| | Parameter | Unit | Standard | PLEXIGLAS® Resist AG 100 |
|---|---|---|---|---|
| **Mechanical values** | | | | |
| Tensile modulus | 1 mm/min | MPa | ISO 527 | 2200 |
| Tensile stress at yield | 50 mm/min | MPa | ISO 527 | 55 |
| Yield strain | 50 mm/min | % | ISO 527 | 5 |
| Nominal strain at break | | % | ISO 527 | 45 |
| Charpy impact strength | 23°C | $kJ/m^2$ | ISO 179/1eU | 120 |
| **Thermal values** | | | | |
| Vicat softening temperature | B/50 | °C | ISO 306 | 105 |
| Glass transition temperature | | °C | ISO 11357 | 112 |
| Deflection temperature | 0.45 MPa | °C | ISO 75 | 105 |
| Deflection temperature | 1.8 MPa | °C | ISO 75 | 100 |
| Coefficient of linear thermal expansion | 0-50 °C | E-5/°K | ISO 11359 | 11 |
| Flammability UL 94 | 1.5 mm | Class | IEC 707 | HB |
| **Rheological values** | | | | |
| Melt volume rate, MVR | 230°C / 3.8 kg | $cm^3/10$ min | ISO 1133 | 1.1 |
| Melt volume rate, MVR | 260°C / 3.8 kg | $cm^3/10$ min | ISO 1133 | 7.7 |
| **Optical values** | d = 3mm | | | |
| Transmittance | $D_{65}$ | % | ISO 13468-2 | 91 |
| Haze | | % | ASTM D1003 | 0.7 |
| Refractive index | | | ISO 489 | 1.49 |
| **Other values** | | | | |
| Density | | $g/cm^3$ | ISO 1183 | 1.16 |
| Water absorption in water | | % | ISO 62 | 1.5 |
| Moisture absorption | 23°C / 50 % | % | ISO 62 | 0.5 |
| **Recommended processing conditions** | | | | |
| Predrying temperatures | | °C | | 70-80 |
| Length of predrying Desiccant-type dryer | | h | | 3-4 |
| Mass temperature | | °C | | 235-270 |
| Mold temperature (injection molding) | | °C | | 60-80 |
| Die temperature (extrusion) | | °C | | 240 |

All the listed technical data are typical material data that were determined on clear-transparent materials and serve as a guide. They are not binding and do not constitute a material specification.

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Röhm GmbH • Dolivostraße 17 • 64293 Darmstadt

plexiglas.polymers@roehm.com
www.plexiglas-polymers.de • www.roehm.com

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