

## 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
<b>Mechanical Properties</b>				
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 <sup>2</sup>	ISO 179/1eU	20
<b>Thermal Properties</b>				
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	1.5 mm	Class	IEC 60695-11-10	HB
<b>Rheological Properties</b>				
Melt Volume Rate, MVR	230°C / 3.8kg	cm <sup>3</sup> /10min	ISO 1133	1.2
<b>Optical Properties</b>				
	d=3 mm			
Luminous transmittance	D65	%	ISO 13468-2	90
Refractive Index	589nm/23°C		ISO 489	1.51
<b>Other Properties</b>				
Density		g/cm <sup>3</sup>	ISO 1183	1.19
Water Absorption in Water	saturation, 23°C	%	ISO 62	2.2
Humidity Absorption	23°C / 50%	%	ISO 62	0.6
<b>Recommended Processing Conditions</b>				
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.

Certified to ISO 9001:2015, ISO 14001:2015 and IATF 16949:2016.

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

Röhm is a worldwide manufacturer of PMMA products sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian continents and under the ACRYLITE® trademark in the Americas.

® = registered trademark

PLEXIGLAS and PLEXIMID are registered trademarks of Röhm GmbH.

CAMPUS is a registered trademark of Chemie Wirtschaftsförderungs-GmbH, Frankfurt / M.

Röhm GmbH • Dolivostraße 17 • 64293 Darmstadt  
plexiglas.polymers@roehm.com  
www.plexiglas-polymers.de  
www.roehm.com

Ref. No.: MC41-E3 A1142 Date: 2019-08-27