Plexiglas® Resist zk40

Polymethyl Methacrylate Acrylic

Evonik Industries AG

Message:

Product Profile:
PLEXIGLAS® Resist zk40 is an amorphous, impact-modified thermoplastic molding compound (PMMA-I).
Typical properties of impact-modified PLEXIGLAS® molding compounds are
excellent transmission and clarity
brilliant appearance
the pleasant feel and sound of the moldings.
PLEXIGLAS® Resist zk40 is characterized by the following special properties:
very good break resistance and impact strength
improved resistance to stress cracking
AMECA listing.
Application:
Used for injection molding. Profile extrusion or coextrusion are also possible.
Examples:
lighting fixtures, writing and drawing utensils, domestic appliances and sanitaryware

General Information	
Additive	Impact Modifier
Features	High Clarity High ESCR (Stress Crack Resist.) High Impact Resistance Pleasing Surface Appearance
Uses	Appliances Flexible Grips Profiles Sanitary Products Writing Instruments
Forms	Pellets
Processing Method	Coextrusion Extrusion Injection Molding
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1) Isochronous Stress vs. Strain (ISO 11403-1) Isothermal Stress vs. Strain (ISO 11403-1) Secant Modulus vs. Strain (ISO 11403-1) Shear Modulus vs. Temperature (ISO 11403-1) Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)	0.700	cm³/10min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50% RH)	0.38	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1600	MPa	ISO 527-2/1
Tensile Stress (Yield)	42.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	4.5	%	ISO 527-2/50
Nominal Tensile Strain at Break	30	%	ISO 527-2
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Unnotched Impact Strength (23°C)	80	kJ/m²	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Unannealed	92.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	85.0	°C	ISO 75-2/A
Glass Transition Temperature	115	°C	ISO 11357-2
Vicat Softening Temperature	94.0	°C	ISO 306/B50
CLTE - Flow (0 to 50°C)	1.2E-4	cm/cm/°C	ISO 11359-2
Flammability	**Nominal Value**		**Test Method**
Flame Rating (1.60 mm)	HB		UL 94
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.490		ISO 489
Transmittance [1]	90.0	%	ISO 13468-2
Injection	**Nominal Value**	**Unit**	
Drying Temperature	< 84.0	°C	
Drying Time	2.0 to 3.0	hr	
Processing (Melt) Temp	230 to 240	°C	
Mold Temperature	50.0 to 70.0	°C	
NOTE			
1.	D65		

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