

ACRYLITE® Resist ZK6SR

Röhm GmbH - Polymethyl Methacrylate Acrylic

Tuesday, January 21, 2020

General Information

Product Description

ACRYLITE® Resist ZK6SR polymer is an amorphous, impact-modified thermoplastic molding and extrusion compound based on polymethyl methacrylate (PMMA).

Typical properties of ACRYLITE® Resist acrylic polymers are:

- high weather resistance
- high light transmission
- improved resistance to stress cracking
- good melt flow rate
- easy to color

The special properties of ACRYLITE® Resist ZK6SR polymer are:

- high impact/break resistance and strength
- high melt strength for extrusion
- low melt flow rate
- medium heat resistance
- AMECA listed as ZK6 (x)

Application:

Used for extruded sheet, co-extruded sheet and extruded profiles.

General

Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Impact Modifier		
Features	<ul style="list-style-type: none"> • Amorphous • Good Colorability • Good Weather Resistance • High Clarity 	<ul style="list-style-type: none"> • High Impact Resistance • High Light Transmission • High Melt Strength • High Strength 	<ul style="list-style-type: none"> • Impact Modified • Low Flow • Medium Heat Resistance
Uses	<ul style="list-style-type: none"> • Appliance Components • Capstock • Household Goods 	<ul style="list-style-type: none"> • Housings • Lenses • Lighting Applications 	<ul style="list-style-type: none"> • Writing Instruments
Agency Ratings	• EC 1907/2006 (REACH)		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	<ul style="list-style-type: none"> • Coextrusion • Extrusion 	<ul style="list-style-type: none"> • Injection Molding • Profile Extrusion 	<ul style="list-style-type: none"> • Sheet Extrusion

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.16	g/cm ³	ASTM D792
Apparent (Bulk) Density	0.71	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	1.3	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Water Absorption (Equilibrium)	< 0.30	%	ASTM D570

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Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1590	MPa	ASTM D638
Tensile Strength	41.4	MPa	ASTM D638
Tensile Elongation (Yield)	5.0	%	ASTM D638
Tensile Elongation (Break)	60	%	ASTM D638
Flexural Modulus	1380	MPa	ASTM D790
Flexural Strength	55.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
0°C, 6.35 mm	43	J/m	
23°C, 3.18 mm	59	J/m	
23°C, 6.35 mm	59	J/m	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	40		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Annealed, 6.35 mm	82.8	°C	
Vicat Softening Temperature	91.1	°C	ASTM D1525
CLTE - Flow (0 to 100°C)	9.0E-5	cm/cm/°C	ASTM D696
Optical	Nominal Value	Unit	Test Method
Transmittance (3200 µm)	> 90.0	%	ASTM D1003
Haze (3200 µm)	< 2.00	%	ASTM D1003
Yellowness Index (3.20 mm)	0.20	YI	ASTM D1925

Notes

¹ Typical properties: these are not to be construed as specifications.