

ACRYLITE® Resist ZK-6

Röhm GmbH - Polymethyl Methacrylate Acrylic

Tuesday, January 21, 2020

General Information

Product Description

ACRYLITE® Resist ZK-6 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 ZK-6 polymer are:

- high impact/break resistance and strength
- low melt flow rate
- medium heat resistance
- AMECA listed as ZK6 (x)
- FDA food contact use

Application:

Used for injection molded parts and extruded sheet.

General

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

ASTM & ISO Properties¹

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)	1.7	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	1520	MPa	ASTM D638
Tensile Strength	43.4	MPa	ASTM D638
Tensile Elongation (Yield)	5.0	%	ASTM D638
Tensile Elongation (Break)	55	%	ASTM D638
Flexural Modulus	1520	MPa	ASTM D790
Flexural Strength	59.3	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
0°C, 6.35 mm	37	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	90.0	°C	
Vicat Softening Temperature	93.9	°C	ASTM D1525
CLTE - Flow (0 to 100°C)	7.2E-5	cm/cm/°C	ASTM D696
Optical	Nominal Value	Unit	Test Method
Transmittance (3200 µm)	91.5	%	ASTM D1003
Haze (3200 µm)	1.00	%	ASTM D1003
Yellowness Index (3.20 mm)	0.30	YI	ASTM D1925

Notes

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