

ACRYLITE® Resist ZK-D

Polymethyl Methacrylate Acrylic
Evonik Cyro LLC

Message:

ACRYLITE® Resist ZK-D 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-D polymer are:

- High impact/break resistance and strength
- medium melt flow rate
- medium heat resistance

Application:

Used for injection molded parts, extruded and co-extruded sheet and profiles.

| General Information | |
|---------------------|-------------------------|
| UL YellowCard | E54671-244589 |
| Additive | Impact Modifier |
| Features | Amorphous |
| | Good Colorability |
| | Good Flow |
| | Good Weather Resistance |
| | High Clarity |
| | High Impact Resistance |
| | High Strength |
| | Impact Modified |
| | Medium Heat Resistance |
| Uses | Appliance Components |
| | Decorative Displays |
| | Household Goods |
| | Housings |
| | Lenses |
| | Lighting Applications |
| | Thin-walled Parts |
| | Writing Instruments |
| Agency Ratings | EC 1907/2006 (REACH) |
| Appearance | Clear/Transparent |
| Forms | Pellets |

| | |
|-------------------|-------------------|
| Processing Method | Coextrusion |
| | Extrusion |
| | Injection Molding |
| | Profile Extrusion |
| | Sheet Extrusion |

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|-------------------|-------------|
| Specific Gravity | 1.16 | g/cm ³ | ASTM D792 |
| Apparent Density | 0.71 | g/cm ³ | ASTM D1895 |
| Melt Mass-Flow Rate (MFR) (230°C/3.8 kg) | 5.8 | g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow | 0.30 to 0.60 | % | ASTM D955 |
| Water Absorption (Equilibrium) | < 0.30 | % | ASTM D570 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (M-Scale) | 33 | | ASTM D785 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 1590 | MPa | ASTM D638 |
| Tensile Strength | 44.1 | MPa | ASTM D638 |
| Tensile Elongation | | | ASTM D638 |
| Yield | 5.0 | % | |
| Break | 40 | % | |
| Flexural Modulus | 1590 | MPa | ASTM D790 |
| Flexural Strength | 64.8 | MPa | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact | | | ASTM D256 |
| 0°C, 6.35 mm | 35 | J/m | |
| 23°C, 6.35 mm | 59 | J/m | |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Annealed, 6.35 mm) | 87.8 | °C | ASTM D648 |
| Vicat Softening Temperature | 93.9 | °C | ASTM D1525 |
| CLTE - Flow (0 to 100°C) | 9.4E-5 | cm/cm/°C | ASTM D696 |
| Optical | Nominal Value | Unit | Test Method |
| Transmittance (3200 μm) | 91.5 | % | ASTM D1003 |
| Haze (3200 μm) | 1.0 | % | ASTM D1003 |
| Yellowness Index (3.20 mm) | 0.30 | YI | ASTM D1925 |

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