

## PRODUCT INFORMATION

# ACRYLITE® Resist ZK-M impact acrylic polymer

### Product Profile:

ACRYLITE® Resist ZK-M 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-M polymer are:

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

### Application:

Used for injection molded parts.

### Examples:

Automotive tail light lenses, instrument panels, light covers, appliance housings, appliance lenses and housewares.

### Processing:

ACRYLITE® Resist ZK-M polymer can be processed in injection molding machines and extrusion lines with 3- zone general purpose screws.

### Physical Form / Packaging:

Available in 1500 lb. gaylord boxes; other packaging available on request.

**Properties:**

|                                   | Parameter      | Unit                       | ASTM-Standard | ACRYLITE® Resist ZK-M impact acrylic polymer<br>Typical Value |
|-----------------------------------|----------------|----------------------------|---------------|---|
| <b>Mechanical Properties</b>      |                |                            |               |   |
| Tensile Strength                  |                | psi [MPa]                  | D 638         | 8500 [58.6]   |
| Tensile Modulus                   |                | x10 <sup>6</sup> psi [GPa] | D 638         | 0.32 [2.2]  |
| Tensile Elongation @ Yield        |                | %                          | D 638         | 5   |
| Tensile Elongation @ Break        |                | %                          | D 638         | 30  |
| Flexural Strength                 |                | psi [MPa]                  | D 790         | 13000 [89.6]  |
| Flexural Modulus                  |                | x10 <sup>6</sup> psi [GPa] | D 790         | 0.32 [2.2]  |
| Notched Izod                      | ¼" bar @23°C   | ft-lb/in [J/m]             | D 256         | 0.85 [44.9]   |
| Notched Izod                      | ¼" bar @0°C    | ft-lb/in [J/m]             | D 256         | 0.50 [26.3]   |
| Rockwell Hardness                 |                | M Scale                    | D 785         | 68  |
| <b>Thermal Properties</b>         |                |                            |               |   |
| Vicat Softening Point             | 50N, 50°C/h    | °F [°C]                    | D 1525        | 210 [99]  |
| Deflection Temperature, Annealed  | 1.8MPa, 0.250" | °F [°C]                    | D 648         | 196 [91]  |
| Coeff. of Linear Therm. Expansion | 32 - 312°F     | 1/F                        | D 696         | 0.00004   |
| Coeff. of Linear Therm. Expansion | 0 - 100°C      | 1/C                        | D 696         | 0.000072  |
| <b>Rheological Properties</b>     |                |                            |               |   |
| Melt Flow Rate                    | 230°C & 3.8 kg | g/10min                    | D 1238        | 3.5   |
| <b>Optical Properties</b>         |                |                            |               | d = 3.2 mm  |
| Light Transmission                |                | %                          | D 1003        | 91.5  |
| Haze                              |                | %                          | D 1003        | 1   |
| Yellowness Index                  |                |                            | E 313         | 0.3   |
| <b>Other Properties</b>           |                |                            |               |   |
| Specific Gravity                  |                |                            | D 792         | 1.18  |
| Water Absorption                  |                | % Max                      | D 570         | 0.3   |
| Mold Shrinkage                    |                | in/in, mm/mm               | D 955         | 0.003 - 0.006   |
| Bulk Density                      |                | g/cc                       | D 1895        | 0.71  |
|                                   |                |                            |               |   |

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.

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Ref. No.: MC164 A1142

The logo for RÖHM, featuring the word "RÖHM" in a bold, black, sans-serif font. The letter "O" is stylized with a small circle above it, resembling a dot or a specific character.