

## PRODUCT INFORMATION

# ACRYLITE® M30 acrylic polymer

### Product Profile:

ACRYLITE® M30 acrylic polymer is an amorphous thermoplastic molding compound based on polymethyl methacrylate (PMMA).

Typical properties of ACRYLITE® acrylic polymers are:

- excellent weather resistance
- high light transmission
- high mechanical strength
- high surface hardness and mar resistance
- good melt flow rate
- versatile colorability due to crystal clarity

The special properties of ACRYLITE® M30 polymer are:

- medium heat resistance
- high melt flow rate
- UV light transmitting
- medium levels of lubricant

### Application:

Used for injection molding optical and technical parts.

### Examples:

Medical instrument lenses, solar collector lenses, lighting lenses, fresnel lenses, light pipes, stereo system display lenses and point-of-purchase displays.

### Processing:

ACRYLITE® M30 polymer can be processed in injection molding machines 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® M30 acrylic polymer<br>Typical Value |
|-----------------------------------|----------------|----------------------------|---------------|--|
| <b>Mechanical Properties</b>      |                |                            |               |  |
| Tensile Strength                  |                | psi [MPa]                  | D 638         | 9200 [63.4]                                    |
| Tensile Modulus                   |                | x10 <sup>6</sup> psi [GPa] | D 638         | 0.47 [3.2]                                     |
| Tensile Elongation @ Yield        |                | %                          | D 638         | 2 - 4  |
| Tensile Elongation @ Break        |                | %                          | D 638         | 2 - 4  |
| Flexural Strength                 |                | psi [MPa]                  | D 790         | 15500 [106.9]                                  |
| Flexural Modulus                  |                | x10 <sup>6</sup> psi [GPa] | D 790         | 0.46 [3.2]                                     |
| Notched Izod                      | ¼" bar @23°C   | ft-lb/in [J/m]             | D 256         | 0.36 [19]                                      |
| Rockwell Hardness                 |                | M Scale                    | D 785         | 89   |
| <b>Thermal Properties</b>         |                |                            |               |  |
| Vicat Softening Point             | 50N, 50°C/h    | °F [°C]                    | D 1525        | 194 [90]                                       |
| Deflection Temperature, Annealed  | 1.8MPa, 0.250" | °F [°C]                    | D 648         | 180 [82]                                       |
| 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        | 24.0   |
| <b>Optical Properties</b>         |                |                            |               |  |
|                                   | d = 3.2 mm     |                            |               |  |
| Light Transmission                |                | %                          | D 1003        | 92   |
| Haze                              |                | %                          | D 1003        | <1   |
| Yellowness Index                  |                |                            | E 313         | <1   |
| <b>Other Properties</b>           |                |                            |               |  |
| Specific Gravity                  |                |                            | D 792         | 1.19   |
| 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        | 0.66   |
|                                   |                |                            |               |  |

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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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.