

PRODUCT INFORMATION

ACRYLITE® Optical HT

Product Profile:

ACRYLITE® Optical HT is an amorphous thermoplastic molding compound (PMMA).

Typical properties of ACRYLITE® molding compounds are:

- good flow
- high mechanical strength, high surface hardness and abrasion resistance
- high light transmittance
- excellent weather resistance

Special properties of ACRYLITE® Optical HT are:

- increased heat deflection temperature under load and increased Vicat softening temperature
- excellent optical clarity
- UL registration RTI 105°C by UL (fi) 746C
- UL registration Outdoor Suitability by UL (f1) 746C

Application:

ACRYLITE® Optical HT is particularly suitable for injection molding and extrusion of technical items.

Examples:

optical waveguides, luminaire covers, automotive lighting, instrument cluster covers, optical lenses, displays, etc.

Processing:

ACRYLITE® Optical HT can be processed on injection molding machines with 3-zone general purpose screws for thermoplastics. For extrusion process a venting zone and corresponding screw is recommended.

Physical Form / Packaging:

ACRYLITE® Optical HT is supplied as pellets of uniform size, packaged in 25kg polyethylene bags; other packaging on request.

Properties:

| | Parameter | Unit | ASTM-Standard | ACRYLITE® Optical HT Typical Value |
|------------------------------------------|----------------|----------------------------|---------------|------------------------------------------|
| Mechanical Properties | | | | |
| Tensile Strength | | psi [MPa] | D 638 | 13500 |
| Tensile Modulus | | x10 ⁶ psi [GPa] | D 638 | 0.605 |
| Tensile Elongation @ Yield | | % | D 638 | 2 - 4 |
| Tensile Elongation @ Break | | % | D 638 | 2 - 4 |
| Flexural Strength | | psi [MPa] | D 790 | 16000 |
| Flexural Modulus | | x10 ⁶ psi [GPa] | D 790 | 0.43 |
| Notched Izod | ¼" bar @23°C | ft-lb/in [J/m] | D 256 | 0.30 |
| Rockwell Hardness | | M Scale | D 785 | 98 |
| Thermal Properties | | | | |
| Vicat Softening Point | 50N, 50°C/h | °F [°C] | D 1525 | 244 [118] |
| Deflection Temperature, Annealed | 1.8MPa, 0.250" | °F [°C] | D 648 | 237 [114] |
| Flammability UL 94 | 1.5 mm | Class | IEC 707 | HB |
| Rheological Properties | | | | |
| Melt Flow Rate | 230°C & 3.8 kg | g/10min | D 1238 | 2.2 |
| Optical Properties | | | | |
| | d = 3.2 mm | | | |
| Light Transmission | | % | D 1003 | 92 |
| Haze | | % | D 1003 | <0.5 |
| Yellowness Index | | | E 313 | <1 |
| Other Properties | | | | |
| Specific Gravity | | | D 792 | 1.19 |
| Recommended Processing Conditions | | | | |
| Predrying Temperature | | F [°C] | | 194 – 212 [90 – 100] |
| Predrying Time in Desiccant-Type Drier | | h | | 4 – 6 |
| Melt Temperature | | F [°C] | | 446 - 482 [230 - 250] |
| Mold Temperature (Injection Molding) | | F [°C] | | 167 - 203 [75 - 95] |

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.