

LATI LATAN 13 K/30 30% Carbon Fiber Reinforced Polyoxymethylene Copolymer (POM) (Unverified Data**)

Category: Polymer, Thermoplastic, Acetal (POM), Acetal Copolymer, Carbon Fiber Filled

Material Notes:

Description: Latan series thermoplastics are polyoxymethylene copolymer (POM) products. The main applications for Latan feature good wear resistance, chemical inertness and low water absorption (gears, cams, bushings, and other parts for the electromechanical, hydraulic, and automotive sectors, and others). A good resistance to hydrolysis makes it usable in hot water up to 80°-90°C. Basic Latan versions featuring low or high flowability are available, as well as an elastomer modified version to improve product toughness. Specific Notes for this Material: 30% carbon fiber; very high rigidity; low specific resistivity; good self-lubricating properties. Disclaimer from LATI: This document contains information based on average values as obtained from the results of laboratory tests and observations made on LATI materials. Tested materials were injection molded, used in their natural color, and conditioned in compliance with Standard ASTM D 618, procedure A. These values refer to LATI's best technical and scientific knowledge at the moment of testing and cannot be used as a basis for the development of applications. For a better assessment of the materials, you are kindly requested to contact LATI's technical or commercial offices, which are at your disposal and will supply detailed information on the most suitable characteristics for their intended use. With reference to DPR n.224 dated May 24, 1988, issued in accordance with EC Guide-lines 85/374, LATI Industria Termoplastici S.p.A. declines all responsibility arising from an improper use of the products described in this document. All data provided by LATI.

Order this product through the following link: http://www.lookpolymers.com/polymer_LATI-LATAN-13-K30-30-Carbon-Fiber-Reinforced-Polyoxymethylene-Copolymer-POM-nbspUnverified-Data.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|--------------|---------------|-----------------|
| Density | 1.48 g/cc | 0.0535 lb/in³ | ISO 1183 |
| Water Absorption | 0.20 % | 0.20 % | at 23°C; ISO 62 |
| Linear Mold Shrinkage | 0.0030 cm/cm | 0.0030 in/in | LATI |
| Linear Mold Shrinkage, Transverse | 0.0060 cm/cm | 0.0060 in/in | LATI |

| Mechanical Properties | Metric | English | Comments | |
|----------------------------|-----------------------|-----------------------|-------------|--|
| Hardness, Rockwell M | 92 | 92 | ASTM D785 | |
| Tensile Strength, Ultimate | 85.0 MPa | 12300 psi | ISO 527 | |
| Flexural Modulus | 17.0 GPa | 2470 ksi | ASTM D790 | |
| Izod Impact, Notched | 0.380 J/cm | 0.712 ft-lb/in | ASTM D256 | |
| 1200 impuot, Notoneu | @Temperature -20.0 °C | @Temperature -4.00 °F | ACTIVIDEOU | |
| | 0.380 J/cm | 0.712 ft-lb/in | ASTM D256 | |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | AO INI DESO | |
| | 0.400 J/cm | 0.749 ft-lb/in | | |



| Mechanical Properties | Metric merature -40.0 °C | English © Pemperature -40.0 °F | ASTM 0256 Comments | |
|-------------------------|-----------------------------|-----------------------------------|-----------------------|--|
| Charny Impact Unnatched | 0.900 J/cm ² | 4.28 ft-lb/in ² | DIN 52452 | |
| Charpy Impact Unnotched | @Temperature -20.0 °C | @Temperature -4.00 °F | DIN 53453 | |
| | 0.900 J/cm ² | 4.28 ft-lb/in ² | DIN 53453 | |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | DIN 33433 | |
| | 0.900 J/cm ² | 4.28 ft-lb/in ² | DIN 53453 | |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | DIN 33433 | |

| Thermal Properties | Metric | English | Comments |
|--|--------------------|----------------------|---------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 168 °C | 334 °F | ASTM D648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 162 °C | 324 °F | ASTM D648 |
| Vicat Softening Point | 163 °C | 325 °F | 50°C/h 50N; ISO 306 |
| HB | | НВ | |
| Flammability, UL94 | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| Oxygen Index | 18 % | 18 % | ISO 4589 |

| Electrical Properties | Metric | English | Comments | |
|----------------------------|--------------------|----------------------|-----------|--|
| Surface Resistance | 1000 ohm | 1000 ohm | IEC 93 | |
| Dielectric Strength | 3.00 kV/mm | 76.2 kV/in | IEC 243-1 | |
| | @Thickness 2.00 mm | @Thickness 0.0787 in | | |
| Comparative Tracking Index | <= 100 V | <= 100 V | IEC 112 | |

| Processing Properties | Metric | English | Comments |
|-----------------------|---------------|--------------|--|
| Melt Temperature | 180 - 210 °C | 356 - 410 °F | |
| Mold Temperature | 80.0 - 100 °C | 176 - 212 °F | |
| Drying Temperature | 80.0 - 100 °C | 176 - 212 °F | Not essential, temperature can be reduced when using vacuum ovens. |
| Dry Time | >= 3 hour | >= 3 hour | Not essential, drying time can be reduced when using vacuum ovens. |

| Descriptive Properties | Value | Comments |
|-------------------------------------|-------|----------|
| Heat Resistance - Ball Test (125°C) | Υ | IEC 335 |



| Descriptive Properties Test (165°C) | Value | Comments |
|-------------------------------------|--------|----------|
| Injection Speed | medium | |
| Needle Burner Test | N | 1.47 mm |
| | N | 3.05 mm |

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