

Quadrant EPP Acetron® MD POM-C + metal detectable additive, extruded (ISO Data)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, Unreinforced

Material Notes:

Metal detectable POM-C grade High mechanical strength, stiffness and hardness Excellent resilience Good creep resistance High impact strength, even at low temperatures Very good dimensional stability (low water absorption) Good sliding properties and wear resistance Excellent machinability Good electrical insulating and dielectric properties Physiologically inert (most grades are suitable for food contact) Not self-extinguishing Food contact compliant according to FDA, and EU Directive 2002/72 EC Continuous use temperature up to 105 °C (221 °F) Metal and visual detection by blue color; metal detection level for particles 3mm x 3mm x 3mm Detection by x-ray also possible

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Acetron-MD-POM-C-metal-detectable-additive-extruded-ISO-Data.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|-----------|---------------------------|------------|
| Density | 1.46 g/cc | 0.0527 lb/in ³ | ISO 1183-1 |
| Moisture Absorption at Equilibrium | 0.19 % | 0.19 % | 50% RH |
| Water Absorption at Saturation | 0.75 % | 0.75 % | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|-------------|-------------|------------------------|
| Hardness, Rockwell M | 86 | 86 | ISO 2039-2 |
| Hardness, Shore D | 80 | 80 | |
| Ball Indentation Hardness | 155 MPa | 22500 psi | ISO 2039-1 |
| Tensile Strength | 66.0 MPa | 9570 psi | at Yield; ISO 527-1/-2 |
| Elongation at Break | 15 % | 15 % | ISO 527-1/-2 |
| Elongation at Yield | 14 % | 14 % | ISO 527-1/-2 |
| Tensile Modulus | 2.95 GPa | 428 ksi | ISO 527-1/-2 |
| Flexural Strength | 93.0 MPa | 13500 psi | |
| Flexural Modulus | 2.80 GPa | 406 ksi | |
| Compressive Strength | 25.0 MPa | 3630 psi | ISO 604 |
| | @Strain 1 % | @Strain 1 % | |
| | 44.0 MPa | 6380 psi | ISO 604 |
| | @Strain 2 % | @Strain 2 % | |
| | 76.0 MPa | 11000 psi | ISO 604 |

| Mechanical Properties | @Strain 5 % Metric | @Strain 5 % English | Comments |
|----------------------------------|-------------------------|----------------------------|---------------|
| K Factor (ISO) | 45 µm/km | 45 µm/km | |
| Charpy Impact Unnotched | 7.00 J/cm ² | 33.3 ft-lb/in ² | ISO 179-1/1eU |
| Charpy Impact, Notched | 0.500 J/cm ² | 2.38 ft-lb/in ² | ISO 179-1/1eA |
| Coefficient of Friction, Dynamic | 0.30 - 0.45 | 0.30 - 0.45 | |

| Thermal Properties | Metric | English | Comments |
|---|----------------------------|------------------------------------|--------------------------------|
| CTE, linear | 130 µm/m-°C | 72.2 µin/in-°F | |
| | @Temperature 23.0 - 100 °C | @Temperature 73.4 - 212 °F | |
| Thermal Conductivity | 0.310 W/m-K | 2.15 BTU-in/hr-ft ² -°F | |
| Melting Point | 165 °C | 329 °F | DSC, 10°C/min.; ISO 11357-1/-3 |
| Maximum Service Temperature, Air | 90.0 °C | 194 °F | Continuous; 20,000 h |
| | 105 °C | 221 °F | Continuous; 5,000 h |
| Deflection Temperature at 1.8 MPa (264 psi) | 100 °C | 212 °F | ISO 75-1/-2 |
| Flammability, UL94 | HB | HB | |
| Oxygen Index | <= 20 % | <= 20 % | ISO 4589-1/-2 |

| Electrical Properties | Metric | English | Comments |
|--------------------------------|-------------------|-------------------|-----------|
| Volume Resistivity | >= 1.0e+13 ohm-cm | >= 1.0e+13 ohm-cm | IEC 60093 |
| Surface Resistivity per Square | >= 1.0e+12 ohm | >= 1.0e+12 ohm | IEC 60093 |

| Compliance Properties | Metric | English | Comments |
|-------------------------|--------|---------|----------|
| 3A-Dairy | No | No | |
| European Food 1935/2004 | Yes | Yes | |
| FDA | Yes | Yes | |
| USP Class VI | No | No | |

| Chemical Resistance Properties | Metric | English | Comments |
|--------------------------------|--------------|--------------|----------|
| Acids, Strong (pH 1-3) | Unacceptable | Unacceptable | |
| Acids, Weak | Limited | Limited | |

| Alphabet Chemical Resistance Properties | Acceptable Metric | Acceptable English | Comments |
|---|-----------------------------|------------------------------|----------|
| Alkalies, Strong (pH 11-14) | Acceptable | Acceptable | |
| Alkalies, Weak | Acceptable | Acceptable | |
| Chlorinated Solvents | Limited | Limited | |
| Continuous Sunlight | Limited | Limited | |
| Hot Water / Steam | Limited | Limited | |
| Hydrocarbons - Aliphatic | Acceptable | Acceptable | |
| Hydrocarbons - Aromatic | Acceptable | Acceptable | |
| Inorganic Salt Solutions | Acceptable | Acceptable | |
| Ketones, Esters | Acceptable | Acceptable | |

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