

Acetal (POM-C & POM-H)



A versatile engineering plastic for many applications

Service. Quality. Value.

| | Natural or Black un-modified | Acetal-C +25% Glass | Acetal-C + PTFE | Acetal-C ESD60, conductive | Acetal-C ESD90, dissipative | |
|----------------------------------------------------------|------------------------------|---------------------|-----------------|----------------------------|------------------------------------|-----------------------------------|
| Mechanical Properties | | | | | | |
| Density at 20°C | 1.41 | 1.58 | 1.52 | 1.40 | 1.34 | g/cm ³ |
| Tensile strength @ yield | 67 | 65 | 50 | 40 | 42 | MPa |
| Elongation @ break | 30 | 3.0 | 16 | 30 | 20 | % |
| Tensile modulus of elasticity | 2800 | 4500 | 2500 | 1900 | 1800 | MPa |
| Notched impact strength (Charpy) | 6 | 4 | 4 | 5 | 5 | kJ/m ² |
| Ball indentation hardness | 150 | 195 | 120 | 100 | 90 | N/mm ² |
| Hardness (Shore D) | 81 | 85 | 80 | - | 76 | Scale D |
| Electrical Properties | | | | | | |
| Volume resistivity | 10 ¹³ | - | - | 10 ³ | 10 ⁹ - 10 ¹² | Ohm cm |
| Surface resistivity | 10 ¹³ | - | - | 10 ³ | 10 ⁹ - 10 ¹¹ | Ohm |
| Dielectric constant, 50 Hz | 3.8 | - | 3.7 | - | - | - |
| Dielectric dissipation factor, 50 Hz | 0.002 | - | 0.002 | - | - | - |
| Dielectric strength | 40 | - | 33 | - | - | Kv/mm |
| Comparative tracking index (CTI) - solution | 600 | - | 600 | - | - | - |
| Thermal Properties | | | | | | |
| Melting Temperature | 165 | 165 | 165 | 165 | 165 | °C |
| Heat deflection temperature - method A, 1.8 MPa | 110 | 160 | 98 | 89 | - | °C |
| Coefficient of thermal expansion (Avg between 20 - 60°C) | 110 | 30 | 120 | 130 | 170 | 10 ⁻⁶ .K ⁻¹ |
| Specific thermal capacity at 100 °C | 1.50 | - | - | - | - | kJ/(kg - K) |
| Thermal conductivity at 20 °C | 0.31 | - | - | 0.31 | - | W/(m - K) |
| Service temperature - long term | -50 to +100 | -20 to +100 | -50 to +100 | -20 to +100 | -50 to +85 | °C |
| - short term | +140 | +140 | +140 | +140 | +140 | |
| Chemical resistance | | | | | | |
| Acid resistance | + | +/0 | | +/0 | + | |
| Alkali resistance | + | + | | + | + | |
| Hydrocarbon resistance | + | + | | + | + | |
| Chlorinated hydrocarbon resistance | 0 | 0 | | 0 | 0 | |
| Aromatic resistance | + | + | | + | + | |
| Ketone resistance | + | + | | + | + | |
| Resistance to hot water | + | + | | + | + | |

Key: + = YES 0 = LIMITED - = NO