

## LG Chemical LUCEL CF-610 Electrically Conductive POM, 10% Carbon Fiber Filled, High Strength, Wear Resistant

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

### Material Notes:

LUCEL semi-crystalline acetal copolymer resins are produced by gas phase polymerization. LUCEL resins can be widely accepted as the replacement of thermosets, aluminum and zinc die-casts or other metals. Characteristics: No pungent smell in processing Excellent thermal stability based on structure of Acetal Copolymer Well balanced mechanical properties and resistance to creep Highest fatigue resistance to organic and chemical and hot water Excellent friction and abrasion resistance High dimensional stability and good moldability Easy part design and application over a broad range of environmental conditions Applications: Automotive: Water valve parts, radiator drain cock, carburetor float, exhaust gas valve, diaphragm valve, door lock, winker switch, wiper gear and pivot bearing, speedometer gear, window glass bottom channel, safety belt, retractor parts, door handle, lumbar support handle, sun visor bracket, collapsible room mirror stay, fender mirror body, waster pump nozzle Electrical and Electronic: Switch, coil bobbin, micrometer base, tuner parts, control switch parts, dial mechanism, cassette tape reel, power transmission gear, shaft nearing, bracket, fan motor housing, spring frame of headphone, arc shooter, toner agitating rotor, printer mechanism, gas meter component Industrial Parts and Others: Spring, bearing, spray guns, power cylinder, watch gear, alarm clock base, hot water pot housing, gear housing, table top chain runner, zipper, partition corner piece curtain runner, blind gear, door runner, office furniture parts, accessories, comb, pressure container Information Provided by LG Chem

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LG-Chemical-LUCEL-CF-610-Electrically-Conductive-POM-10-Carbon-Fiber-Filled-High-Strength-Wear-Resistant.php](http://www.lookpolymers.com/polymer_LG-Chemical-LUCEL-CF-610-Electrically-Conductive-POM-10-Carbon-Fiber-Filled-High-Strength-Wear-Resistant.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.45 g/cc	1.45 g/cc	ASTM D792
Linear Mold Shrinkage	0.0050 - 0.010 cm/cm	0.0050 - 0.010 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ASTM D785
Tensile Strength at Break	94.0 MPa	13600 psi	ASTM D638
Elongation at Break	5.0 %	5.0 %	ASTM D638
Flexural Strength	137 MPa	19900 psi	ASTM D790
Flexural Modulus	6.40 GPa	928 ksi	ASTM D790
Izod Impact, Notched	0.450 J/cm	0.843 ft-lb/in	ASTM D256
	4.50 J/cm	8.43 ft-lb/in	Reverse notched; ASTM D256
Coefficient of Friction, Dynamic	0.15	0.15	ASTM D1894
Coefficient of Friction, Static	0.11	0.11	ASTM D1894

Taber Abrasion, mg/1000 Cycles Mechanical Properties	23 Metric	23 English	CS 17 Wheel, 1000g; ASTM D1044 Comments
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Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	165 Â°C	329 Â°F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	160 Â°C	320 Â°F	ASTM D648

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	170 - 190 Â°C	338 - 374 Â°F	
Middle Barrel Temperature	190 - 210 Â°C	374 - 410 Â°F	
Front Barrel Temperature	200 - 220 Â°C	392 - 428 Â°F	
Nozzle Temperature	200 - 220 Â°C	392 - 428 Â°F	
Melt Temperature	210 - 220 Â°C	410 - 428 Â°F	
Mold Temperature	60.0 - 120 Â°C	140 - 248 Â°F	
Drying Temperature	90.0 - 110 Â°C	194 - 230 Â°F	
Dry Time	3 - 6 hour	3 - 6 hour	
Injection Pressure	39.23 - 83.36 MPa	5690 - 12090 psi	Second
	68.7 - 118 MPa	9960 - 17100 psi	First
Back Pressure	0.000 - 3.92 MPa	0.000 - 569 psi	
Screw Speed	40 - 75 rpm	40 - 75 rpm	

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