# 3M Dyneon™ Fluorel™ FE-5642Q Fluoroelastomer VF2 + HFP Dipolymer (discontinued **)

**Category :** Polymer , Thermoset , Fluoropolymer, TS , Thermoset Fluoroelastomer , Rubber or Thermoset Elastomer (TSE)

**Material Notes:**

Data provided by the manufacturer, Dyneon LLC.Incorporated cure polymer, 65.9%F in polymer with 22% Medium Thermal Carbon Black (N990), 2% MgO, and 4% Ca(OH)2. The FE series grades are Dyneon's cleanest running molded goods polymers. Provide improved flow, mold release, scorch safety & offer improved metal adhesion. Excellent for parts with complex profiles. Cleaner running than FX-9038 with improved release & compression set resistance Used in Molded Goods Applications.

Order this product through the following link:
http://www.lookpolymers.com/polymer_3M-Dyneon-Fluorel-FE-5642Q-Fluoroelastomer-VF2-HFP-Dipolymer-nbspdiscontinued-.php

| Physical Properties | Metric | English | Comments |
|---|---|---|---|
| Density | 1.80 g/cc | 0.0650 lb/in³ | |
| Oxygen Transmission | 98.0 cc-mm/m²-24hr-atm | 249 cc-mil/100 in²-24hr-atm | |
| Mooney Viscosity | 40<br>@Temperature 121 °C | 40<br>@Temperature 250 °F | ML1+10 |

| Mechanical Properties | Metric | English | Comments |
|---|---|---|---|
| Hardness, Shore A | 72 | 72 | |
| Tensile Strength, Ultimate | 16.0 MPa | 2320 psi | |
| Tensile Strength, Yield | 4.80 MPa | 696 psi | M100 |
| Elongation at Break | 220 % | 220 % | |
| Coefficient of Friction, Dynamic | 0.80 | 0.80 | |
| Compression Set | 17 %<br>@Temperature 200 °C | 17 %<br>@Temperature 392 °F | 70 hr; ASTM D395B |

| Thermal Properties | Metric | English | Comments |
|---|---|---|---|
| CTE, linear | 200 µm/m-°C<br>@Temperature 20.0 °C | 111 µin/in-°F<br>@Temperature 68.0 °F | |
| Specific Heat Capacity | 1.65 J/g-°C | 0.394 BTU/lb-°F | |
| Thermal Conductivity | 0.240 W/m-K | 1.67 BTU-in/hr-ft²-°F | |
| Glass Transition Temp, Tg | -18.0 °C | -0.400 °F | TR10 |

| Electrical Properties | Metric | English | Comments |
|---|---|---|---|
| Electrical Resistivity | 1.00e+13 - 1.00e+14 ohm-cm | 1.00e+13 - 1.00e+14 ohm-cm | |
| Dielectric Constant | 11.4<br>@Frequency 6.00e+7 Hz | 11.4<br>@Frequency 6.00e+7 Hz | |
| Dielectric Strength | 25.0 kV/mm | 635 kV/in | |

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