

# Exceed™ 4518CB Wire & Cable

## Performance Polymer

### Product Description

Exceed™ 4518CB performance polymer resin is an ethylene 1-hexene copolymer. It is an excellent blend partner in halogen-free flame retardant compounds and cable jacketing to balance inherent mechanical strength with good processability. It has superior mechanical properties that protect cables in various working conditions. Sufficient carbon black or UV stabilizer should be added to meet cable jacketing specifications.

### General

|                           |  |   |
|---------------------------|--|---|
| Availability <sup>1</sup> | ▪ Latin America  | ▪ North America   |
| Additive                  | ▪ Thermal Stabilizer: Yes  |   |
| Applications              | ▪ Communication Cable<br>▪ Halogen-free flame retardant (HFFR) compounds | ▪ High Voltage Jacketing<br>▪ Low Voltage Jacketing<br>▪ Medium Voltage Jacketing |
| Form(s)                   | ▪ Pellets  |   |
| Revision Date             | ▪ 04/01/2019   |   |

| Resin Properties           | Typical Value (English) | Typical Value (SI)      | Test Based On     |
|----------------------------|-------------------------|-------------------------|-------------------|
| Density / Specific Gravity | 0.918 g/cm <sup>3</sup> | 0.918 g/cm <sup>3</sup> | ASTM D792         |
| Melt Index (190°C/2.16 kg) | 4.5 g/10 min            | 4.5 g/10 min            | ASTM D1238        |
| Peak Melting Temperature   | 235 °F                  | 113 °C                  | ExxonMobil Method |

| Thermal                     | Typical Value (English) | Typical Value (SI) | Test Based On |
|-----------------------------|-------------------------|--------------------|---------------|
| Vicat Softening Temperature | 217 °F                  | 103 °C             | ASTM D1525    |

| Molded Properties   | Typical Value (English) | Typical Value (SI) | Test Based On |
|---|-------------------------|--------------------|---------------|
| Tensile Strength at Yield<br>20 in/min (510 mm/min)         | 1700 psi                | 12 MPa             | ASTM D638     |
| Tensile Strength at Break<br>20 in/min (510 mm/min)         | 4100 psi                | 29 MPa             | ASTM D638     |
| Elongation at Yield<br>(20 in/min (510 mm/min))             | 10 %                    | 10 %               | ASTM D638     |
| Elongation at Break<br>(20 in/min (510 mm/min))             | 730 %                   | 730 %              | ASTM D638     |
| Flexural Modulus - 1% Secant<br>(0.051 in/min (1.3 mm/min)) | 33000 psi               | 230 MPa            | ASTM D790A    |
| Durometer Hardness (Shore D, 15 sec)                        | 48                      | 48                 | ASTM D2240    |

| Electrical                    | Typical Value (English) | Typical Value (SI) | Test Based On |
|-------------------------------|-------------------------|--------------------|---------------|
| Volume Resistivity (500 V)    | 6.4E+14 ohms·m          | 6.4E+14 ohms·m     | IEC 62631-3-1 |
| Relative Permittivity (1 MHz) | 2.28                    | 2.28               | IEC 62631-2-1 |
| Dissipation Factor (1 MHz)    | 1.7E-4                  | 1.7E-4             | IEC 62631-2-1 |

### Legal Statement

Contact your ExxonMobil Chemical Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB).

This product is not intended for use in medical applications and should not be used in any such applications.

### Processing Statement

Specimens were compression molded in accordance with ASTM D 4703, Procedure C.

### Notes

Typical properties: these are not to be construed as specifications.

<sup>1</sup> Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

## Exceed™ 4518CB Wire & Cable Performance Polymer

For additional technical, sales and order assistance: [www.exxonmobilchemical.com/ContactUs](http://www.exxonmobilchemical.com/ContactUs)

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