

# Exceed™ Tough m 3812.CB Wire & Cable

## Metalocene Polyethylene

### Product Description

Exceed™ Tough m 3812.CB metalocene polyethylene resin is an ethylene 1-hexene copolymer. It is an excellent blend partner in halogen-free flame retardant compounds and cable jacketing to improve flexibility and mechanical properties. These properties protect the cable in various working conditions and provide potential for higher flame retardant filler loading. Sufficient carbon black or UV stabilizer should be added to meet cable jacketing specifications.

### General

|                           |  |   |  |
|---------------------------|--|---|--|
| Availability <sup>1</sup> | <ul style="list-style-type: none"> <li>Africa &amp; Middle East</li> <li>Asia Pacific</li> </ul>                             | <ul style="list-style-type: none"> <li>Europe</li> <li>Latin America</li> </ul>                         | <ul style="list-style-type: none"> <li>North America</li> </ul>            |
| Additive                  | <ul style="list-style-type: none"> <li>Thermal Stabilizer: Yes</li> </ul>  |   |  |
| Applications              | <ul style="list-style-type: none"> <li>Communication Cable</li> <li>Halogen-free flame retardant (HFFR) compounds</li> </ul> | <ul style="list-style-type: none"> <li>High Voltage Jacketing</li> <li>Low Voltage Jacketing</li> </ul> | <ul style="list-style-type: none"> <li>Medium Voltage Jacketing</li> </ul> |
| Form(s)                   | <ul style="list-style-type: none"> <li>Pellets</li> </ul>  |   |  |
| Revision Date             | <ul style="list-style-type: none"> <li>06/03/2020</li> </ul>   |   |  |

| Resin Properties           | Typical Value (English) | Typical Value (SI)      | Test Based On     |
|----------------------------|-------------------------|-------------------------|-------------------|
| Density / Specific Gravity | 0.912 g/cm <sup>3</sup> | 0.912 g/cm <sup>3</sup> | ASTM D792         |
| Melt Index (190°C/2.16 kg) | 3.8 g/10 min            | 3.8 g/10 min            | ASTM D1238        |
| Peak Melting Temperature   | 232 °F                  | 111 °C                  | ExxonMobil Method |

| Thermal                     | Typical Value (English) | Typical Value (SI) | Test Based On     |
|-----------------------------|-------------------------|--------------------|-------------------|
| Vicat Softening Temperature | 201 °F                  | 94.0 °C            | ExxonMobil Method |

| Molded Properties  | Typical Value (English) | Typical Value (SI) | Test Based On     |
|--|-------------------------|--------------------|-------------------|
| Tensile Stress   | 4300 psi                | 30 MPa             | ExxonMobil Method |
| Tensile Strength at Yield<br>20 in/min (510 mm/min)                    | 1500 psi                | 10 MPa             | ExxonMobil Method |
| Elongation at Yield<br>(20 in/min (510 mm/min))                        | 80 %                    | 80 %               | ExxonMobil Method |
| Elongation at Break <sup>2</sup><br>(20 in/min (510 mm/min))           | > 800 %                 | > 800 %            | ExxonMobil Method |
| Flexural Modulus - 1% Secant<br>Procedure A, 0.051 in/min (1.3 mm/min) | 27000 psi               | 190 MPa            | ExxonMobil Method |
| Durometer Hardness (Shore D, 15 sec)                                   | 44                      | 44                 | ExxonMobil Method |

| Electrical                    | Typical Value (English) | Typical Value (SI) | Test Based On |
|-------------------------------|-------------------------|--------------------|---------------|
| Volume Resistivity (500 V)    | 9.4E+14 ohms-m          | 9.4E+14 ohms-m     | IEC 62631-3-1 |
| Relative Permittivity (1 MHz) | 2.27                    | 2.27               | IEC 62631-2-1 |
| Dissipation Factor (1 MHz)    | 2.5E-4                  | 2.5E-4             | IEC 62631-2-1 |

### Legal Statement

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

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

### Processing Statement

All physical properties were measured on compression molded specimens.

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Metallocene Polyethylene

### 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.

<sup>2</sup> The specimens did not break. Equipment reached maximum elongation.

For additional technical, sales and order assistance: [Contact Us](#)

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