

Macromeric® 0103-212a BK

Polyolefin
Saco Polymers

Message:

Black Non-halogen flame retardant compound
Macromeric ® 0103-212a BK is a black, UV resistant, non-halogen flame retardant RoHS polyolefin compound. It is designed for use in a wide variety of jacketing applications including wire and cable. This compound has superior fire performance; including slow flame propagation, self-extinguishing characteristics, and low smoke production. Macromeric ® 0103-212a BK should be extruded with a screw configuration designed to optimize process conditions and throughput. This extrusion compound meets, or exceeds, several industry jacketing specifications, including UL 1277 tray cable.

| General Information | | | |
|---|---------------------------|-------------------|-------------|
| Additive | Flame Retardant | | |
| Features | Flame Retardant | | |
| | Good UV Resistance | | |
| | Halogen Free | | |
| | Low Smoke Emission | | |
| | Self Extinguishing | | |
| Uses | Cable Jacketing | | |
| | Wire & Cable Applications | | |
| Agency Ratings | UL 1277 | | |
| RoHS Compliance | RoHS Compliant | | |
| Appearance | Black | | |
| Forms | Pellets | | |
| Processing Method | Extrusion | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity ¹ | 1.51 | g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/21.6 kg) | 3.0 | g/10 min | ASTM D1238 |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness | | | ASTM D2240 |
| Shore A, 1 sec | 93 | | |
| Shore D, 1 sec | 59 | | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength (Break) | 13.1 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 180 | % | ASTM D638 |
| Flexural Modulus - 1% Secant | 228 | MPa | ASTM D790 |
| Aging | Nominal Value | Unit | Test Method |
| Change in Tensile Strength in Air | | | ASTM D638 |
| 121°C, 336 hr | 5.0 | % | |
| 136°C, 168 hr | 5.0 | % | |

| Change in Ultimate Elongation in Air | | | ASTM D638 |
|--|--|------|-------------|
| 121°C, 336 hr | -5.0 | % | |
| 136°C, 168 hr | -10 | % | |
| Change in Tensile Strength (70°C, 4 hr, in Oil) | | | ASTM D638 |
| | -15 | % | |
| Change in Ultimate Elongation (70°C, 4 hr, in Oil) | | | ASTM D638 |
| | 5.0 | % | |
| Thermal | Nominal Value | Unit | Test Method |
| Brittleness Temperature ² | -34.0 | °C | ASTM D746 |
| UL Temperature Rating ³ | 90 | °C | UL 1581 |
| Deformation - 2000-gram load (121°C) | 2.5 | % | UL 1277 |
| Head Temperature | 171 to 182 | °C | |
| Flammability | Nominal Value | Unit | Test Method |
| Oxygen Index ⁴ | 38 | % | ASTM D2863 |
| Extrusion | Nominal Value | Unit | |
| Cylinder Zone 1 Temp. | 149 to 160 | °C | |
| Cylinder Zone 2 Temp. | 166 to 177 | °C | |
| Cylinder Zone 3 Temp. | 177 to 188 | °C | |
| Cylinder Zone 4 Temp. | 177 to 188 | °C | |
| Melt Temperature | 182 to 193 | °C | |
| Die Temperature | 188 to 199 | °C | |
| NOTE | | | |
| 1. | 23°C | | |
| 2. | 3 minutes in methanol | | |
| 3. | Test Conditions: Air, 150-days at 97°C | | |
| 4. | 23°C | | |

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