

**Petrothene®**

# KR92717

**High Density Polyethylene**
**Wire and Cable Grade**
**Melt Index 0.50 Density 0.952**
**Applications**

PETROTHENE KR92717 is a high molecular weight, high density polyethylene-based compound designed for use in cable insulation and cable jacketing applications. This black compound contains additive packages to ensure UV and processing stability.

**Processing Techniques**

KR92717, like other thermoplastic polyolefin compounds, can be extruded using a conventional extruder. Below are suggested extrusion conditions for KR92717. These conditions are intended as general guidelines only, and are not optimum values, because manufacturing conditions such as extruder type and size affect the processing of thermoplastic compounds. For further recommendations, please contact your Equistar sales or technical service representative.

**Suggested General Extrusion Conditions**

| Extruder Zone    | Temperature Range          |
|------------------|----------------------------|
| Feed             | 300°- 325°F (149° - 163°C) |
| Zone 2           | 350°- 400°F (177° - 204°C) |
| Zone 3           | 375°- 400°F (204° - 232°C) |
| Zone 4-X         | 460°- 500°F (204° - 232°C) |
| Adapter          | 475°- 500°F (246° - 260°C) |
| Die              | 475°- 500°F (246° - 260°C) |
| Melt Temperature | 475°- 500°F (246° - 260°C) |

**Industry Specifications**

KR92717 meets the requirements of the following: ASTM D 1248 Type III, Class B, Category 4 or 5, Grades E9, E11 and J5.

**Physical Properties**

Typical physical and electrical properties for KR92717 are provided in the table below. For information on resins and compounds for Wire and Cable, contact your Equistar sales or technical service representative.

| Property                                     | Nominal Value | Units             | ASTM Test Method |
|----------------------------------------------|---------------|-------------------|------------------|
| Melt Index                                   | 0.50          | g/10 min.         | D 1238           |
| Density                                      | 0.952         | g/CM <sup>3</sup> | D 1505           |
| Low Temperature Brittleness, F <sub>50</sub> | <-76          | °C                | D 746            |
| Tensile Strength @ Yield                     | 3,200 (22.1)  | psi (MPa)         | D 638            |
| Tensile Strength @ Break                     | 2,200 (15.2)  | psi (MPa)         | D 638            |
| Elongation @ Break                           | 700           | %                 | D 638            |
| Hardness, Shore D                            | 61            |                   | D 2240           |
| Dielectric Constant @ 1 KHz                  | 2.30          |                   | D 1531           |
| Dielectric Constant @ @ 1 MHz                | 2.38          |                   | D 1531           |
| Dissipation Factor @ 1 KHz                   | 0.0002        |                   | D 1531           |
| Dissipation Factor @ 1 MHz                   | 0.0002        |                   | D 1531           |

See Page 2 for tracking resistance information regarding Petrothene® KR92717



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## Tracking Resistance

KR92717 was tested for its resistance to tracking by ASTM D 2132 (Standard Test Method for Dust-and-Fog Tracking and Corrosion Resistance of Electrical Insulating Materials) and ASTM D 2303 (Standard Test Method for Liquid Contaminant, Inclined-Plane Tracking and Erosion of Insulating Materials). The results are listed in the following table.

| ASTM D 2132: Specimen | Time to Failure (h) | Type of Failure |
|-----------------------|---------------------|-----------------|
| A                     | 216.0               | No failure      |
| B                     | 176.2               | Erosion         |
| C                     | 216.0               | No failure      |

### ASTM D 2303:

The time-to-track was 1,028 minutes at 2.5 kV.

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