



Petrothene®

XL07417

Copolymer Compound

Wire and Cable Grade

Density 1.39

Applications

PETROTHENE XL07417 is designed for use in flame retardant primary insulation for low voltage automotive wire and cable applications (SAE J1128), and has been specially formulated to reduce extrudate buildup during processing. PETROTHENE XL07417 is a non-tarnishing, non-halogenated, flame retardant chemically crosslinkable compound. Non-discoloring antioxidant and special active peroxide have been added to ensure thermal stability during processing and optimum curing results.

Processing Techniques

XL07417, like other crosslinkable polyolefin compounds, can be extruded as wire and cable insulation by means of a conventional extruder with a continuous vulcanization tube. Below are suggested extrusion and curing conditions for XL07417. These conditions are intended as general guidelines only, and not optimum values, since manufacturing variables such as extruder type and size, continuous vulcanization tube design and cable construction all have an effect on processing crosslinkable compounds. Contact your Equistar sales or technical service representative for more information.

Suggested General Extrusion Conditions

Extruder Zone	Temperature Range
Feed	225° - 235°F (107°-113°C)
Zone 2	225° - 235°F (107°-113°C)
Zone 3-X	225° - 235°F (107°-113°C)
Adapter	235° - 245°F / 113° - 118°C
Head	235° - 245°F / 113° - 118°C
Melt Temperature	240° - 260°F (116°-127°C)
Screw Cooling	180°F (82°C), if needed to control melt temperature
Die Cooling	90° - 120°F (32° - 49°C) to control die drool

Additional Suggestions

- Maximum screen pack of 40 mesh.
- Little or no die land.
- No predrying normally required.
- Compression ratio of 2:1 or 3:1.
- "Mixing" screws can be used if properly designed to prevent excessive heat build-up. Mixing screws are more useful on short (15/1) extruders.
- Dies should be cleaned frequently to reduce compound build-up.
- On-size dies are recommended.
- Curing line steam temperature should be at least 400°F (204°C).
- Residence time in the steam varies with steam pressure and construction. A dwell time of 15-20 seconds is typical at 250 psi for a #18-20 AWG/TXL construction.

See Page 2 for Physical and Electrical Properties



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**Physical
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Properties**

XL07417 is supplied as a natural compound. For information on other resins and compounds for Wire and Cable contact your Equistar sales or technical service representative.

Property*	Nominal Value	Units	Test Method
Density	1.39	g/cc	D 1505
Oxygen Index	26		D 2863
Tensile Strength, Original	2,560 (17.6)	psi (MPa)	D 412
Aged 7 days @ 165°C	99	% retention	
Elongation, Original	240	%	D 412
Aged 7 days @ 165°C	101	% retention	

* All properties determined from compression-molded, press-cured plaques.

The values listed for physical and electrical properties are nominal values only and are subject to normal variations consistent with the test methods and/or variations found acceptable to the industry.

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