



Petrothene®
YR19548
Polyolefin Compound
Wire and Cable Grade
Density 1.39

Applications

PETROTHENE YR19548 is a colorable, thermoplastic, non-halogenated, flame retardant polyolefin compound formulated for small gauge automotive primary insulation (SAE J1128) and appliance wire insulation when crosslinked by radiation. YR19548 permits high line speeds (3,000 fpm) and extremely fast cure speeds (6,000 fpm).

Processing Techniques

YR19548, like other thermoplastic polyolefin compounds, can be extruded as wire and cable insulation by a conventional extruder. Crosslinking may be achieved by using electron beam radiation. Below are suggested extrusion and curing conditions for YR19548. These conditions are intended as general guidelines only and are not optimum values, since manufacturing variables such as extruder type and size, radiation unit design and cable constructions all have an effect on processing of crosslinkable compounds. For additional information contact your Equistar sales or technical service representative.

Suggested General Extrusion Conditions

Extruder Zone	Temperature Range	Extruder Zone	Temperature Range
Feed	265° - 275°F (129° - 135°C)	Adapter	295° - 305°F (146° - 152°C)
Zone 2	265° - 275°F (129° - 135°C)	Die	295° - 305°F (146° - 152°C)
Zone 3	265° - 275°F (129° - 135°C)	Head	305° - 315°F (152° - 157°C)
Zone 4-X	275° - 285°F (135° - 141°C)	Melt Temperature	340° - 360°F (171° - 182°C)

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
- Suggested radiation dosage: 7.5MRads

Typical Properties

Property*	Nominal Value	Units	ASTM Test Method
Density	1.39	g/cc	D 1505
Tensile Strength, Original	2,400 (16.6)	psi (MPa)	D 412
Aged 7 days @ 150°C	100	% ret.	D 638
Elongation, Original	220	%	D 638
Aged 7 days @ 150°C	90	% ret.	D 638

* All properties determined from #20 AWG/TXL wire irradiated at 7.5 Mrads. The data obtained 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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