# Pexidan® R/T

Crosslinked Polyethylene

Saco Polymers

## Message:

Low density moisture curable polyethylene compound for low voltage building wire insulation (CSA RW-90, RWU-90, AC-90, TECK-90).
Pexidan® R/T is a low density XLPE system curable by moisture and consists of a silane pre-grafted base compound A-3001 and a catalyst masterbatch CAT-009 (Sioplas method). Mixed in the proper proportions (95/5) the two components result, after extrusion, in a material curable by exposure to hot water at 70-90°C or even ambient moisture. Pexidan® R/T is listed with the Canadian Standards Association for use in RW-90 and RWU-90 XLPE applications and rated to -40°C. Pexidan® R/T is RoHS-compliant.

| General Information | |
|---|---|
| Features | Low density<br>Crosslinkable |
| Uses | Low voltage insulation<br>Wire and cable applications |
| Agency Ratings | CSA not rated |
| RoHS Compliance | RoHS compliance |
| Forms | Particle |
| Processing Method | Wire & Cable Extrusion<br>Extrusion |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 0.918 | g/cm³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 0.80 | g/10 min | ASTM D1238 |
| Degree of Crosslinking | 72 | % | ASTM D2765 |
| Shrinkback | 0.00 | mm | CSA 22.2 No. 38 |
| Deformation | 5.0 | % | CSA 22.2 No. 38 |
| Insulation Resistance | | | CSA 22.2 No. 38 |
| 15°C | 1.15E+10 | Mohms/km | CSA 22.2 No. 38 |
| after 12 weeks : 90°C | 2.09E+10 | Mohms/km | CSA 22.2 No. 38 |
| Hot Elongation - elongation under load (150°C) [1] | 40 | % | Internal method |
| Head Temperature | 185 | °C | |
| Screw cooling | neutral | | |

| Mechanical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Tensile Strength | | | |
| Yield | 12.4 | MPa | CSA 22.2 No. 38 |
| Fracture [2] | 15.9 | MPa | ASTM D638 |
| Fracture | 16.5 | MPa | CSA 22.2 No. 38 |

| | | | |
|---|---|---|---|
| Tensile Elongation | | | |
| Fracture [3] | 310 | % | ASTM D638 |
| Fracture | 340 | % | CSA 22.2 No. 38 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Brittleness Temperature | < -75.0 | °C | ASTM D746 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Dielectric Constant | | | |
| 1 MHz | 2.28 | | ASTM D150 |
| 100 MHz | 2.28 | | ASTM D150 |
| 60 Hz | 2.38 | | CSA 22.2 No. 38 |
| Dissipation Factor | | | ASTM D150 |
| 1 MHz | 4.4E-4 | | ASTM D150 |
| 100 MHz | 4.6E-4 | | ASTM D150 |

| Additional Information | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Curing can be done in the following ways:<br>by immersion in hot water at 70-90°C<br>by exposure to low pressure steam<br>ambient atmospheric moisture<br>In all cases curing time depends on wall thickness, temperature, relative humidity and quantity of wire on the reel.Typical values reported above (except MFR) are obtained from 14 AWG solid conductor samples with a 30-mil wall, cured in hot water (6 hours @ 95°C). | | | |

| Extrusion | Nominal Value | Unit |
|---|---|---|
| Cylinder Zone 1 Temp. | 154 - 171 | °C |
| Cylinder Zone 2 Temp. | 154 - 171 | °C |
| Cylinder Zone 3 Temp. | 154 - 171 | °C |
| Cylinder Zone 4 Temp. | 154 - 171 | °C |
| Die Temperature | 185 | °C |

| NOTE | |
|---|---|
| 1. | 15 minutes, 0.2 N/mm$^2$ load |
| 2. | After thermal ageing (7days @121°C) |
| 3. | After thermal ageing (7days @121°C) |



Recommended distributors for this material

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