

## LyondellBasell Petrothene® GA808093 Linear Low Density Polyethylene

Category: Polymer, Thermoplastic, Polyethylene (PE), LDPE, Low Density Polyethylene (LDPE), Extrusion Grade

## **Material Notes:**

ApplicationsPETROTHENE GA 808-093 is a broad molecular weight, linear low density polyethylene resin designed for use as a wire and cable insulation. An antioxidant package is added to ensure thermal stability during processing. The resin also contains a metal deactivator to prevent degradation from copper while the cable is in service. Processing Techniques GA 808-093, like other thermoplastic polyolefin compounds, can be extruded as wire and cable insulation using a conventional extruder. Below are suggested extrusion conditions for GA 808-093. These conditions are intended as general guidelines only and are not optimum values, since manufacturing conditions, such as extruder type and size have an effect on the processing of thermoplastic resins. This product is from the former Equistar product line.

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_LyondellBasell-Petrothene-GA808093-Linear-Low-Density-Polyethylene.php

| Physical Properties                      | Metric        | English       | Comments                                     |
|--|---------------|---------------|--|
| Density                                  | 0.920 g/cc    | 0.0332 lb/in³ | ASTM D1505                                   |
| Environmental Stress Crack<br>Resistance | >= 1000 hour  | >= 1000 hour  | 10% Igepal®, F <sub>50</sub> ;<br>ASTM D1693 |
| Melt Flow                                | 0.70 g/10 min | 0.70 g/10 min | ASTM D1238                                   |

| Mechanical Properties     | Metric   | English   | Comments   |
|---------------------------|----------|-----------|------------|
| Hardness, Shore D         | 57       | 57        | ASTM D2240 |
| Tensile Strength at Break | 15.2 MPa | 2200 psi  | ASTM D638  |
| Tensile Strength, Yield   | 11.7 MPa | 1700 psi  | ASTM D638  |
| Elongation at Break       | 650 %    | 650 %     | ASTM D638  |
| 1% Secant Modulus         | 345 MPa  | 50000 psi | ASTM D790  |

| Thermal Properties      | Metric      | English    | Comments                    |
|-------------------------|-------------|------------|-----------------------------|
| Brittleness Temperature | <= -76.0 °C | <= -105 °F | F <sub>50</sub> ; ASTM D746 |

| Electrical Properties | Metric             | English            | Comments   |
|-----------------------|--------------------|--------------------|------------|
| Dielectric Constant   | 2.29               | 2.29               | ASTM D1531 |
|                       | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |            |
| Dissipation Factor    | 0.00010            | 0.00010            | ASTM D1531 |
|                       | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |            |



| Processing Properties | Metric       | English      | Comments |
|-----------------------|--------------|--------------|----------|
| Feed Temperature      | 154 - 163 °C | 310 - 325 °F |          |
| Zone 2                | 177 - 193 °C | 350 - 380 °F |          |
| Zone 3                | 193 - 210 °C | 380 - 410 °F |          |
| Zone 4-x              | 216 - 221 °C | 420 - 430 °F |          |
| Adapter Temperature   | 216 - 221 °C | 420 - 430 °F |          |
| Die Temperature       | 216 - 221 °C | 420 - 430 °F |          |

## **Contact Songhan Plastic Technology Co.,Ltd.**

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