

## DSM Arnitel® EM630 63 Shore D, Extrusion Grade Copolyester Elastomer (North America)

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyester TPE , Polyester, TP

### Material Notes:

**Product description:** Arnitel® combines the advantages of engineering thermoplastics, being easy to process with excellent mechanical properties, at the same time with the flexibility of rubbers. Arnitel does not require vulcanization. This leads to substantial reductions in part cost. Arnitel can be used over a wide range of temperatures. Arnitel has exceptional fatigue, creep resistance and resistance to oils, greases and many other chemicals. **Characteristics of Arnitel:** Excellent strength over a wide range of temperatures Excellent dynamic properties e.g. creep and fatigue High heat resistance Exceptional resistance to oils and greases Good chemical resistance High degree of versatility in processing Easy coloring using masterbatches Surface quality from high gloss to textured Excellent heat resistance (long term 165°C) Good electrical insulation properties Low moisture absorption, excellent dimensional stability Easy flow, fast cooling times **Typical Applications:** **Automotive:** Arnitel® is extensively used in the automotive industry for applications requiring exceptional fatigue resistance and resistance to oil and greases. Examples are: Rack and Pinion Bellows, Constant Velocity Joint Boots (CVJ Boots), Air brake tubings. **Arnitel in the Electronic and Consumer Goods Industry:** Arnitel® finds enormous potential and is also widely used in consumer electronic companies. Arnitel® is a good choice for low noise gears where their exceptional processability without any defects such as flash, makes it the material solution of choice. Arnitel® is also used in highly demanding applications such as in mobile phone antennas. Arnitel® has exceptional flexibility and can perform or even outperform functions that normally require conventional rubbers. Available in a wide range of hardnesses, Arnitel can replace metals, thermoplastics, leather and rubber, often with a reduction in finished part costs. Information provided by DSM.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Arnitel-EM630-63-Shore-D-Extrusion-Grade-Copolyester-Elastomer-North-America.php](http://www.lookpolymers.com/polymer_DSM-Arnitel-EM630-63-Shore-D-Extrusion-Grade-Copolyester-Elastomer-North-America.php)

| Physical Properties                | Metric   | English  | Comments  |
|------------------------------------|--|--|---|
| Density                            | 1.23 g/cc  | 0.0444 lb/in <sup>3</sup>                              | ISO 1183  |
| Water Absorption                   | 0.63 %   | 0.63 %   | Sim. to ISO 62  |
| Moisture Absorption at Equilibrium | 0.18 %   | 0.18 %   | Humidity Absorption; Sim. to ISO 62                                       |
| Melt Flow                          | 4.305 g/10 min<br>@Load 2.16 kg,<br>Temperature 230 °C | 4.305 g/10 min<br>@Load 4.76 lb,<br>Temperature 446 °F | Calculated from Volume Flow Rate of 3.5 cm <sup>3</sup> /10 min; ISO 1133 |

| Mechanical Properties   | Metric                     | English                    | Comments     |
|-------------------------|----------------------------|----------------------------|--------------|
| Tensile Strength, Yield | 15.8 MPa<br>@Strain 100 %  | 2290 psi<br>@Strain 100 %  | ISO 527-1/-2 |
|                         | 15.9 MPa<br>@Strain 10.0 % | 2310 psi<br>@Strain 10.0 % | ISO 527-1/-2 |
| Elongation at Break     | >= 300 %                   | >= 300 %                   | ISO 527-1/-2 |

| Mechanical Properties  | Metric                 | English                    | Comments     |
|------------------------|------------------------|----------------------------|--------------|
| Tensile Modulus        | 0.310 GPa              | 45.0 ksi                   | ISO 527-1/-2 |
| Charpy Impact, Notched | 1.20 J/cm <sup>2</sup> | 5.71 ft-lb/in <sup>2</sup> | ISO 179/1eA  |
|                        | @Temperature -30.0 °C  | @Temperature -22.0 °F      |              |
|                        | NB                     | NB                         | ISO 179/1eA  |
|                        | @Temperature 23.0 °C   | @Temperature 73.4 °F       |              |

| Thermal Properties              | Metric               | English              | Comments                 |
|---------------------------------|----------------------|----------------------|--------------------------|
| CTE, linear, Parallel to Flow   | 150 µm/m-°C          | 83.3 µin/in-°F       | ISO 11359-1/-2           |
|                                 | @Temperature 20.0 °C | @Temperature 68.0 °F |                          |
| CTE, linear, Transverse to Flow | 150 µm/m-°C          | 83.3 µin/in-°F       | ISO 11359-1/-2           |
|                                 | @Temperature 20.0 °C | @Temperature 68.0 °F |                          |
| Melting Point                   | 212 °C               | 414 °F               | 10°C/min; ISO 11357-1/-3 |
| Vicat Softening Point           | 125 °C               | 257 °F               | 50°C/h 50N; ISO 306      |
| Flammability, UL94              | HB                   | HB                   | IEC 60695-11-10          |
|                                 | @Thickness 1.60 mm   | @Thickness 0.0630 in |                          |

| Electrical Properties      | Metric             | English            | Comments    |
|----------------------------|--------------------|--------------------|-------------|
| Volume Resistivity         | 1.20e+13 ohm-cm    | 1.20e+13 ohm-cm    | IEC 60093   |
| Surface Resistance         | 2.50e+14 ohm       | 2.50e+14 ohm       | IEC 60093   |
| Dielectric Constant        | 4.1                | 4.1                | IEC 60250   |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |             |
| Dielectric Strength        | 22.0 kV/mm         | 559 kV/in          | IEC 60243-1 |
| Dissipation Factor         | 0.017              | 0.017              | IEC 60250   |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |             |
| Comparative Tracking Index | 600 V              | 600 V              | IEC 60112   |

| Descriptive Properties         | Value | Comments |
|--------------------------------|-------|----------|
| High impact or impact modified | Yes   |          |
| Injection molding              | Yes   |          |
| Other Extrusion                | Yes   |          |

| Release Agent<br>Descriptive Properties | Yes<br>Value | Comments |
|---|--------------|----------|
| Without Fillers                         | Yes          |          |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China