ROYALENE® EPDM
TRILENE® LIQUID EPDM

ROYALENE® EPDM | ROYALEEDGE® EPDM | ROYALTHERM® EPDM
TRILENE LIQUID® EPDM

Royalene® EPDM and RoyalEdge® EPDM are used in a wide variety of applications that require superior heat, ozone and chemical resistance, excellent long-term aging and outstanding weathering.

Trilene Liquid® EPDM Polymers represent a class of specialty low molecular weight EPDM polymers that are available in liquid or free-flow powder form.

lionelastomers.com
ROYALENE® EPDM

ROYALENE® EPDM is used in a wide variety of elastomeric applications that require superior heat, ozone and chemical resistance, excellent long term aging and outstanding weathering. ROYALENE® applications include automotive, industrial and consumer hoses, weatherseals, molded goods, wire and cable insulations, window profiles, roof sheeting, thermoplastic elastomers, and viscosity modifiers for lubricants.

<table>
<thead>
<tr>
<th>ROYALENE® EPDM</th>
<th>Mooney ML 1+4 (°C)</th>
<th>Wt. % Diene</th>
<th>E/P Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>301T</td>
<td>40 (125)</td>
<td>3.1 DCPD</td>
<td>67/33</td>
</tr>
<tr>
<td>400 (a)</td>
<td>37 (125)</td>
<td>3.0 DCPD</td>
<td>67/33</td>
</tr>
<tr>
<td>505</td>
<td>55 (125)</td>
<td>8.0 ENB</td>
<td>60/40</td>
</tr>
<tr>
<td>509</td>
<td>55 (125)</td>
<td>8.0 ENB</td>
<td>71/29</td>
</tr>
<tr>
<td>510</td>
<td>65 (125)</td>
<td>4.5 ENB</td>
<td>75/25</td>
</tr>
<tr>
<td>511</td>
<td>45 (100)</td>
<td>4.6 ENB</td>
<td>57/43</td>
</tr>
<tr>
<td>512</td>
<td>57 (125)</td>
<td>3.9 ENB</td>
<td>68/32</td>
</tr>
<tr>
<td>515</td>
<td>82 (150)</td>
<td>9.5 ENB</td>
<td>62/38</td>
</tr>
<tr>
<td>525</td>
<td>65 (125)</td>
<td>8.1 ENB</td>
<td>60/40</td>
</tr>
<tr>
<td>535</td>
<td>53 (100)</td>
<td>9.4 ENB</td>
<td>60/40</td>
</tr>
<tr>
<td>539</td>
<td>70 (125)</td>
<td>4.6 ENB</td>
<td>74/26</td>
</tr>
<tr>
<td>547</td>
<td>57 (150)</td>
<td>10.0 ENB</td>
<td>63/37</td>
</tr>
<tr>
<td>556</td>
<td>60 (125)</td>
<td>4.5 ENB</td>
<td>71/29</td>
</tr>
<tr>
<td>563</td>
<td>75 (125)</td>
<td>4.5 ENB</td>
<td>60/40</td>
</tr>
<tr>
<td>580 HT</td>
<td>60 (100)</td>
<td>2.7 ENB</td>
<td>53/47</td>
</tr>
<tr>
<td>591</td>
<td>70 (125)</td>
<td>2.4 ENB</td>
<td>68/32</td>
</tr>
<tr>
<td>645 (b)</td>
<td>48 (125)</td>
<td>8.5 ENB</td>
<td>66/34</td>
</tr>
<tr>
<td>677 (b)</td>
<td>50 (125)</td>
<td>4.5 ENB</td>
<td>70/30</td>
</tr>
<tr>
<td>694 (c)</td>
<td>48 (125)</td>
<td>4.5 ENB</td>
<td>70/30</td>
</tr>
<tr>
<td>868 XE</td>
<td>67 (150)</td>
<td>6.0 ENB</td>
<td>72/28</td>
</tr>
</tbody>
</table>

(a) Product contains 100 phr (50%) white, hydrotreated paraffinic oil.
(b) Product contains 15 phr (13%) white, hydrotreated paraffinic oil.
(c) Product contains 75 phr (43%) white, hydrotreated paraffinic oil.
**ROYALEdge® EPDM**

RoyalEdge® EPDM is used in a wide variety of elastomeric applications that require superior heat, ozone and chemical resistance, excellent long term aging and outstanding weathering. RoyalEdge® EPDM products are terpolymers of ethylene, propylene and a non-conjugated diene (ENB or DCPD) that vary in viscosity, ethylene/propylene ratio, and type and amount of diene according to desired processability and end properties.

<table>
<thead>
<tr>
<th>RoyalEdge® EPDM</th>
<th>Mooney ML 1+4</th>
<th>Wt. % Diene</th>
<th>E/P Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>5041</td>
<td>25 (125°C)</td>
<td>2.8 DCPD</td>
<td>75/25</td>
</tr>
</tbody>
</table>

**ROYALThERM® EPDM**

Royaltherm® is a silicone-modified EPDM. It is ideally suited for high temperature applications. Compared to normal EPDM, Royaltherm® provides better heat and weather resistance. Compared to silicone, it provides better tensile strength, flex fatigue resistance and other mechanical properties. It exhibits good electrical properties in moist conditions and, unlike silicone, retains physical properties even in hermetically sealed environments.

<table>
<thead>
<tr>
<th>Royaltherm® EPDM</th>
<th>Mooney ML 1+4</th>
<th>Cured Hardness Shore A (Peroxide Cure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1411A</td>
<td>23 - 37</td>
<td>30 - 40</td>
</tr>
<tr>
<td>1721</td>
<td>50 - 65</td>
<td>55 - 65</td>
</tr>
</tbody>
</table>

**TRILENE® LIQUID EPDM**

Trilene® Liquid EPDM represents a class of specialty lower molecular weight EPDM polymers that are available in liquid or free-flow powder form. Trilene is used in gear oils and greases, caulks, adhesives, roof coatings and many other applications that require a low molecular weight liquid EPDM product having the characteristics of conventional EPDM. Trilene Freeflow® products are free-flowing polymers made by combining Trilene Liquid EPDM and silica. Trilene grades that have a freeflow equivalent will have (FF) beside the product number, and the properties will be designated in a similar fashion under the respective columns.

<table>
<thead>
<tr>
<th>Trilene® EPDM</th>
<th>Wt. % Diene</th>
<th>E/P Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 (FF)</td>
<td>10.0 DCPD (10.0 DCPD)</td>
<td>50/50 (50/50)</td>
</tr>
<tr>
<td>67 (FF)</td>
<td>9.5 ENB (7.7 ENB)</td>
<td>46/54 (46/54)</td>
</tr>
<tr>
<td>77</td>
<td>10.5 ENB</td>
<td>74/26</td>
</tr>
<tr>
<td>CP-80 (FF)</td>
<td>– (–)</td>
<td>41/59 (41/59)</td>
</tr>
<tr>
<td>CP-600</td>
<td>–</td>
<td>41/59</td>
</tr>
<tr>
<td>CP-1100 (FF)</td>
<td>– (–)</td>
<td>41/59 (43/57)</td>
</tr>
<tr>
<td>CP-2000</td>
<td>–</td>
<td>41/59</td>
</tr>
</tbody>
</table>

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