

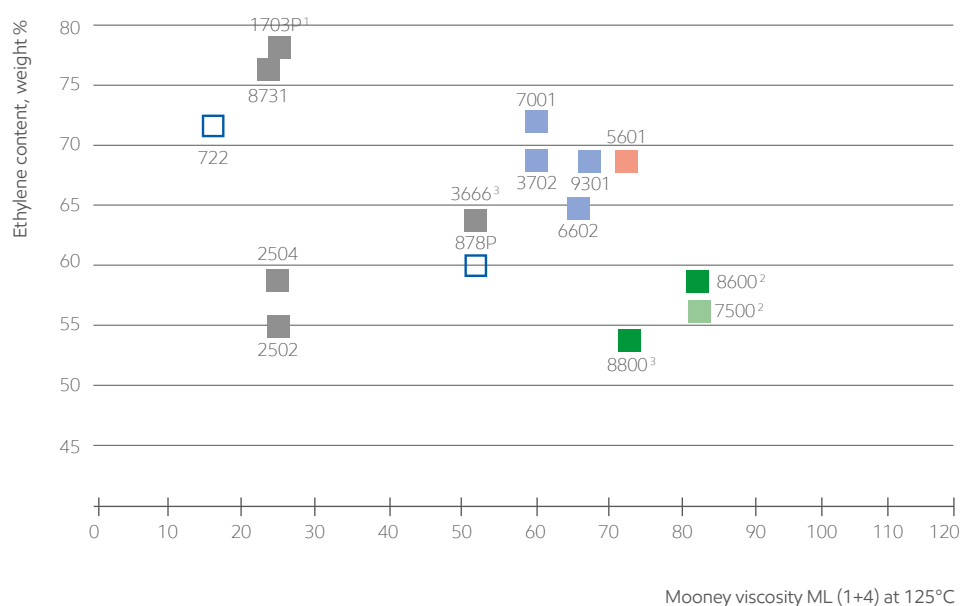
# Grade slate

ExxonMobil Product Solutions' broad range of Vistalon™ ethylene propylene diene (EPDM) rubber grades are used in a wide variety of applications in the automotive, consumer, and industrial sectors. They deliver heat-resistant part performance and processing benefits that exceed those provided by natural and general-purpose rubbers. They also offer cost-effective, high-performance solutions that provide ozone and UV resistance, water and polar fluid resistance, heat resistance up to 175°C, low temperature flexibility, elastic properties under compression, excellent physical properties at high filler loadings and outstanding electrical insulation. With more than 55 years of leadership in EPDM rubber technology, we offer expertise in both metallocene and Ziegler-Natta-based EPDM rubber processes and continue to meet changing application needs globally.

## Typical properties

Grade	Oil phr	Mooney viscosity ML (1+4 at 125°C) ASTM D1646	Ethylene weight % ASTM D3900	ENB weight % ASTM D6047	MWD type	Form
<b>Copolymers</b>						
722	-	16	72	-	Narrow	Pellet
878P	-	48	61	-	Narrow	Pellet
<b>Terpolymers - low to medium diene</b>						
1703P	-	25	77	0.9 <sup>1</sup>	Very broad	Pellet
2502	-	25	50	4.5	Medium	Pellet
2504	-	25	58	4.7	Broad	Dense bale
3666	75	52	64	4.5	Broad	Dense bale
3702	-	60	69	2.8	Narrow	Pellet
5601	-	72	69	5.0	Medium	Pellet
6602	-	80	55	5.2	Narrow	Pellet
7001	-	60	73	5.0	Narrow	Pellet
7500	-	82 <sup>2</sup>	56	5.7	Bimodal	Semi-dense bale
8731	-	24	76	3.3	Broad	Dense bale
9301	-	67	69	2.8	Narrow	Pellet
<b>Terpolymers - high diene</b>						
8600	-	81 <sup>2</sup>	58	8.9	Bimodal	Semi-dense bale
8800	15	73	54	10.0	Bimodal	Semi-dense bale

## Vistalon™ EPDM rubber copolymers and terpolymers



### Molecular weight distribution (MWD)

	Terpolymers	Copolymers
	ENB>7%	ENB≤7%
Narrow	<span style="color:blue">■</span>	<span style="color:blue">□</span>
Medium	<span style="color:red">■</span>	<span style="color:red">□</span>
Broad	<span style="color:gray">■</span>	<span style="color:gray">□</span>
Bimodal	<span style="color:green">■</span>	<span style="color:green">□</span>

<sup>1</sup> VNB used as diene <sup>2</sup> ML (1+8) at 125°C <sup>3</sup> Oil-extended

## Vistalon grades features and typical applications

	Sponge	Dense profiles	Hose and belts	Seals, gaskets and pads	Roofing and sheeting	Electricals
<b>Applications</b>	<ul style="list-style-type: none"> <li>Extruded profiles</li> <li>Molding (low or high pressure)</li> <li>SG from 0.3 to 0.9</li> </ul>	<ul style="list-style-type: none"> <li>Auto sealing</li> <li>Building profiles</li> <li>Sulfur or peroxide cure</li> </ul>	<ul style="list-style-type: none"> <li>Hydraulic</li> <li>Air</li> <li>Steam</li> <li>Water</li> </ul>	<ul style="list-style-type: none"> <li>Gaskets</li> <li>O-rings</li> <li>Mechanical goods</li> <li>Appliances</li> </ul>	<ul style="list-style-type: none"> <li>Flat and low-slope roofs</li> <li>Pond liners</li> <li>Geomembranes</li> </ul>	<ul style="list-style-type: none"> <li>Insulation</li> <li>Medium voltage</li> <li>Low voltage</li> <li>Jacketing</li> </ul>
<b>Key polymer features</b>	<ul style="list-style-type: none"> <li>Oil loading</li> <li>Molecular weight</li> <li>Collapse resistance</li> <li>Low temperature flexibility</li> </ul>	<ul style="list-style-type: none"> <li>Class A surface</li> <li>Snappiness</li> <li>Extrusion consistency</li> <li>Cost effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Collapse resistance</li> <li>Green strength</li> <li>Filler loading</li> <li>Heat aging</li> <li>Compression set</li> </ul>	<ul style="list-style-type: none"> <li>Processing and flow</li> <li>Compound viscosity</li> <li>Physicals</li> </ul>	<ul style="list-style-type: none"> <li>Heat aging</li> <li>UV resistance</li> <li>Filler loading</li> <li>Extreme weather</li> <li>Processing</li> </ul>	<ul style="list-style-type: none"> <li>Resistivity</li> <li>Loss factor</li> </ul>
<b>Vistalon™ EPDM grades</b>	<ul style="list-style-type: none"> <li>8600 (bimodal)</li> <li>8800 (bimodal)</li> </ul>	<ul style="list-style-type: none"> <li>3666</li> <li>7001</li> <li>5601</li> <li>7500</li> <li>6602</li> </ul>	<ul style="list-style-type: none"> <li>3666</li> <li>6602</li> <li>3702</li> <li>7001</li> <li>5601</li> <li>7500</li> </ul>	<ul style="list-style-type: none"> <li>2504</li> <li>6602</li> <li>3666</li> <li>7001</li> <li>2502</li> <li>7500</li> <li>5601</li> </ul>	<ul style="list-style-type: none"> <li>3702</li> <li>9301</li> <li>5601</li> <li>7500</li> </ul>	<ul style="list-style-type: none"> <li>722</li> <li>3702</li> <li>1703P</li> <li>5601</li> <li>2504</li> <li>7001</li> <li>2502</li> <li>8731</li> </ul>
<b>Vistalon EPDM value</b>	<ul style="list-style-type: none"> <li>Fast extrusion</li> <li>Easy geometry control</li> <li>Fast cure</li> <li>Good compression set</li> </ul> <p><b>Bimodal properties</b></p> <ul style="list-style-type: none"> <li>Up to 15% faster mixing cycle</li> <li>Single-pass mixing</li> <li>Outstanding long term compression set</li> <li>Soft, thin wall</li> </ul>	<p><b>Amorphous backbone (7500)</b></p> <p><b>Tailored compound properties depending on blend partner:</b></p> <ul style="list-style-type: none"> <li>High elasticity (3666)</li> <li>Improved green strength, physicals and filler loading (5601, 7001)</li> </ul>			<ul style="list-style-type: none"> <li>Long term performance</li> <li>Excellent calendaring and autoclave curing (3702, 9301)</li> <li>Rotocure, CV cure (others)</li> </ul>	<ul style="list-style-type: none"> <li>High range MV: 722 or 1703P for outstanding MV insulation</li> <li>Other MV: 2504 or 8731</li> <li>LV: 3702, 5601 and 7001</li> <li>Molded connectors (2504)</li> <li>Blend partner with XLPE for enhanced flexibility (722)</li> </ul>

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