7001

Vistalon™

7001 A Metallocene EPDM for Molding and Extrusion

Your Benefits

- Outstanding physical properties
- Improved mixing, mill handling and extrusion compared to typical narrow MWD grades

Technical Features

- Tailored MWD, high ethylene and medium diene polymer
- ExxonMobil Chemical's proprietary Exxpol™ technology for precise control of molecular composition and architecture
- Functionally equivalent to Vistalon 7000 with improved elasticity
- Applicable for molded and mechanical goods, hoses, and extruded profiles
- Available in dispersable bale or pellet product form

Typical Properties

Properties	Test Methods	Vistalon 7001	Vistalon 7000
Mooney Viscosity, ML (1+4) at 125°C	ASTM D 1646 modified (1)	60	59
Ethylene Content, wt %	ASTM D 3900 A	73	73
ENB Content, wt %	ASTM D 6047	5	5

(1) Radial cavity dies, polymer remassed at 145 ±10°C.

ExxonMobil Chemical

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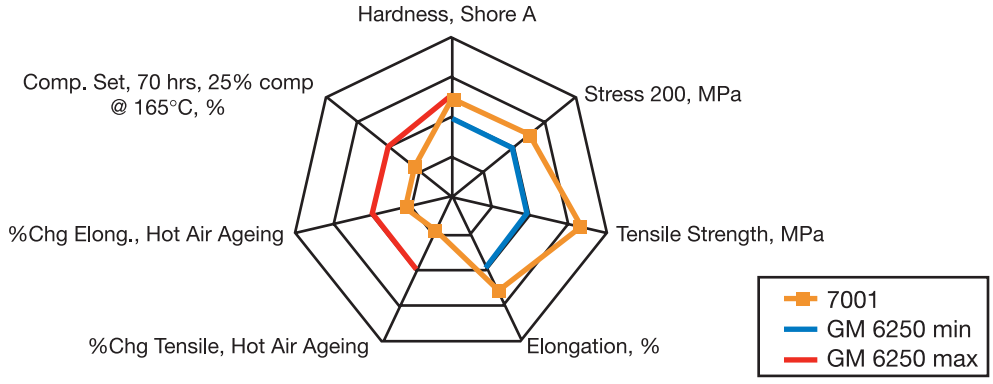
7001 in Peroxide Cure Automotive Hose



Vistalon™ ethylene-propylene rubber

Technical Information

SULFUR CURE INDUSTRIAL HOSE		
Ingredient, phr	**7000**	**7001**
Polymer	100	100
N650 GPF-HS Carbon Black	100	100
N762 SRF-LM Carbon Black	90	90
CaCO3	50	50
Sunpar 2280	110	110
Zinc Oxide	10	10
Stearic Acid	1	1
Sulfur	0.75	0.75
TMTDS	2.5	2.5
ZDMDC	2.5	2.5
ZDBDC (Butyl Zimate)	2.5	2.5
Sulfasan R (DTDM)	1.7	1.7
Formula Weight	461	461
Filler/Oil Ratio	2.2	2.2
Fill Factor	65%	65%
Compound Mooney Viscosity (ML)		
(1+4) 100°C (212°F), MU	51.4	51.7
Mooney Scorch (MS) at 132°C (270°F) – Large Rotor		
t10, min	9.0	9.7
ODR @ 170°C (338°F), 3 deg arc		
t90, min	5.1	5.2
MH-ML, dNm	58.4	59.5
Green Physical Properties – Uncured		
10% Modulus, MPa	137.7	136.9
50% Modulus, MPa	155.0	157.7
Press Cure, t90 + 4 min at 170°C (338°F)		
Hardness, Shore A	77	75
100% Modulus, MPa	3.7	3.8
200% Modulus, MPa	6.8	7.1
Tensile Strength, MPa	9.1	9.6
Elongation, %	340	361
Aged Properties, Press Cure, t90 + 4 min at 170°C, 70 hrs at 125°C		
Change in Hardness	4	4
Change in Tensile Strength, %	16.5	18.7
Change in Elongation, %	-39	-36
Compression Set		
72 hrs @ 23°C/25% Deflection, %	22	20
22 hrs @ 70°C/25% Deflection, %	12	14

SULFUR CURE LIGHT COLORED MOLDING		
Ingredient, phr	**7000**	**7001**
EPDM	100	100
Flexon 876	80	80
Stearic Acid	1	1
TMQ	0.5	0.5
Carbowax 3350	3	3
Polyvest 25	2	2
ZnO (Red Seal)	5	5
Ultrasil VN 3	30	30
Sillikolloid	100	100
Sulfur	1	1
MBTS (80%)	1.5	1.5
Rhenocure ZAT (70%)	2	2
ZBEC (70%)	0.5	0.5
Rhenocure S/G (80%)	1	1
Formula Weight	327.5	327.5
Compound Mooney ML (1+4) @ 100°C		
ML (1+4), MU	29.0	30.9
Mooney Scorch (1+30) @ 125°C		
t10, min	23.53	19.97
MDR 12 min 0.5 Deg @ 180°C		
MH-ML, dNm	9.6	9.0
ts2, min	1.4	1.2
t90, min	3.8	3.5
Compression Set 24 hrs 30% compr. @ 70°C	1.5* 1.4 * Tc90 MDR, min 8'	
CS. % @ 70°C	27	29
CS. % @ 100°C	59	67
Hardness Shore A, EE	1.4 * Tc90 MDR, min 4'	
Hardness 30s	59	54
Rubber Tensile Test, EE	1.4 * Tc90 MDR, min 4'	
Mod 100%, MPa	1.7	1.6
Stress @ Break, MPa	>13.2	>12.4
Strain @ Break, %	>815	>805
Tear DIN 53507 A 100mm/min @ 23°C	1.4 * Tc90 MDR, min 4'	
Tear Resist., KN/m @ 23°C	18.5	20.7
Aging 72 hrs @ 125°C	1.4 * Tc90 MDR, min 4'	
Change in Hardness, Shore A	6	9
Mod 100%, MPa	2.8	2.7
Detergent Aging (Ariel) 72 hrs @ 95°C	1.4 * Tc90 MDR, min 4'	
Change in Hardness, Shore A	-4	-3
Mod 100%, MPa	1.8	1.5

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