



興業塑膠五金製品廠 Hings Plastic & Metal Products Mfy.

香港九龍旺角新填地街594號興業樓2樓
電話：(852) 2669-1939 傳真：(852) 2669-1792
E-mail: hingspmp@netvigator.com, hingspmp@hingsgroup.com

HINGS[®]

Elastomer
Systems



Sealing Gasket • Rubber Guard • Rubber Tactile • Safety Mat • Expansion Joint

Properties of EPDM Extruded Profile

PROPERTY ASTM (Test Method)	Value
Hardness (D2240)	65° Shore A
Tensile Strength (D412)	9.8 Mpa
Elongation at break (D412)	425%
Ozone Resistance 1ppm for 100 hours @104°F(40°C)(D1149)	No cracks
Compression Set(D395B) after 22 hours @212°F(100°C) after 70 hours @212°F(175°C)	20 % 28 %
Heating Aging, 70 hours @212°F (100°C)(D865), Change in: Ult.Tensile Strength Ult.Elongation	-2.2 % -5.5 %
UV Resistance	Excellent

*This rubber formulation is special designed for use as windows, curtain walls, air sealing and glazing. And matching the designation of ASTM C542, C-864 and BS 4255 : Part 1 : 1986

*Manufacturer : Hings Plastic & Metal Products Mfy.



Santoprene[®]
THERMOPLASTIC RUBBER
Advanced
Elastomer
Systems U.S.A.

2/F., HINGS BUILDING, 594 RECLAMATION STREET,
MONGKOK, KOWLOON, HONG KONG.
TEL: (852) 2669-1939 FAX: (852) 2669-1792
Web-site: www.hingsgroup.com

Värnamo[®]
Sealing Strip
The original from Sweden



興業塑膠五金製品廠
Hings Plastic & Metal Products Mfy.

Tel : (852) 2669 1939 E-mail : hingsmpm@hings.hk Fax : (852) 2669 1792

HINGS[®]
 Elastomer
 Systems



Plastic Wood Sealing Gasket Rubber Guard Rubber Tactile Safety Mat Expansion Joint

To whom it may concern

31 MAR 2005

HINGS' EPDM moulded and extruded products

We certify that our EPDM products are conformed to ASTM C864 ASTM C509-91 and ASTM C542 designation.

The customer size of products does not change the material properties . And all the HINGS' EPDM products are 15 years warranty for material of exposed in the Sydney environment and manufactured from Hings Plastic & Metal Products Mfy.

With any query, please do not hesitate to contract the undersigned.

Regards

F.H. Lin



Santoprene[®]
 THERMOPLASTIC RUBBER
 Advanced
 Elastomer
 Systems U.S.A.

香港九龍旺角新填地街 594 號興業樓 2 樓
 2/F., Hings Building, 594 Reclamation St., Mongkok, Kln., H.K.
Website : www.hingsgroup.com

Värnamo[®]
 Sealing Strip
 The original from Sweden



興業塑膠五金製品廠
Hings Plastic & Metal Products Mfy.

Tel : (852) 2669 1939 E-mail : hingsmp@hings.hk Fax : (852) 2669 1792

HINGS[®]
 Elastomer
 Systems



Plastic Wood Sealing Gasket Rubber Guard Rubber Tactile Safety Mat Expansion Joint

To whom it may concern

Date : 07-12-2009

Ref.: HS1207A

HINGS' Moulded & Extruded EPDM Products

This is to certify that the HINGS' EPDM products are made of 'Vistalon #5601' EPDM by Exxon Mobil Chemical from U.S.A.

Material Origin : U.S.A.

Fabricator : Hings Plastic & Metal Products Mfy.

- * All rubber formulation are special designed to use as glazing, sealing, spacer, location and setting block.
- * Enclosed : Vistalon #5601 description / data.

Your Sincerely,

Mr. F.H. Lin
 Sales Manager
 Hings Plastic & Metal Products Mfy.



Santoprene[®]
 THERMOPLASTIC RUBBER
 Advanced
 Elastomer
 Systems U.S.A.

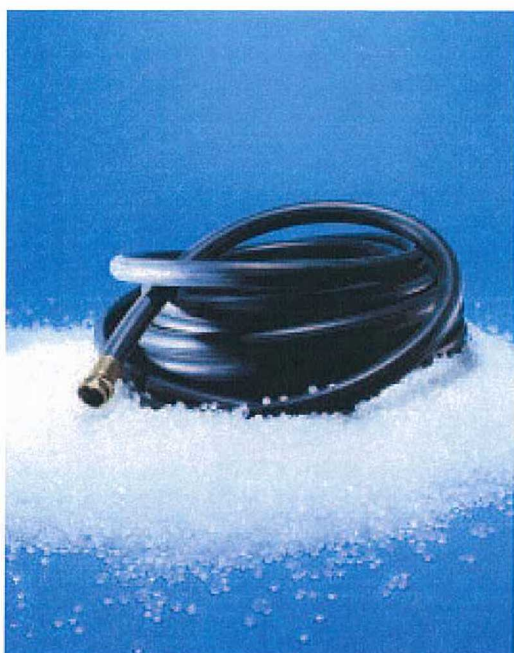
香港九龍旺角新填地街 594 號興業樓 2 樓
 2/F., Hings Building, 594 Reclamation St., Mongkok, Kln., H.K.
 Website : www.hingsgroup.com

Värnamo[®]
 Sealing Strip
 The original from Sweden

5601

Vistalon™

5601 A Metallocene EPDM for Molding and Extrusion



Your Benefits

Offers superior processing compared to typical narrow MWD grades for:

- Smooth and fast extrusions
- Improved mixing, mill handling, and physical properties
- Improved calendarability
- Improved oil retention and cure bloom in compounds

Technical Features

- Tailored MWD, high ethylene and medium diene polymer
- Produced using the ExxonMobil Chemical proprietary Exxpol™ technology
- Applicable for industrial and automotive hoses, extruded profiles and molding applications
- Functional equivalent to Vistalon 5600
- Available in dispersible bale or pellet product form

Typical Properties

Properties	Test Methods	Vistalon 5601	Vistalon 5600
Mooney Viscosity, ML (1+4) at 125°C	ASTM D 1646 modified (1)	72	72
MLRA (1.6-5s SR) at 125°C	ASTM D 1646 modified (1)	340	310
Ethylene Content, wt %	ASTM D 3900 A	68.5	68.5
ENB Content, wt %	ASTM D 6047	5	5

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



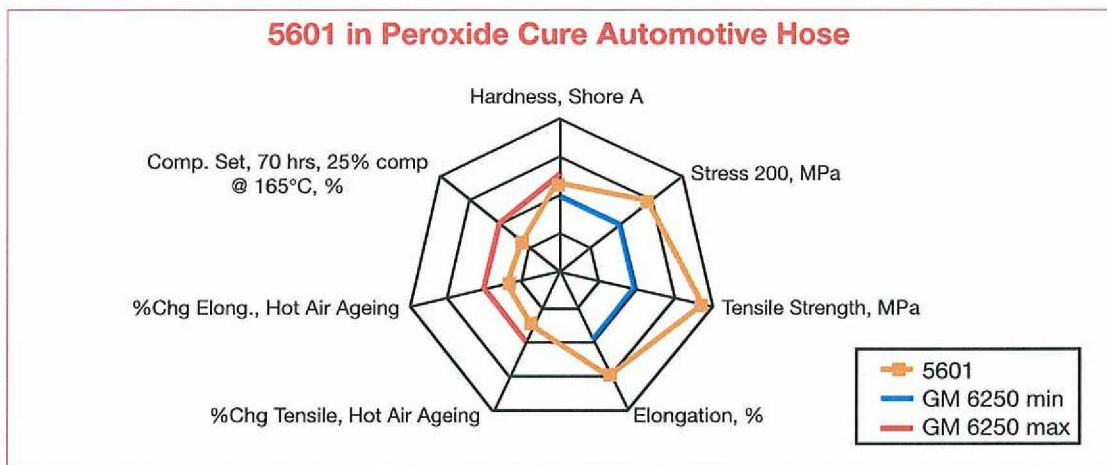
Important information and disclaimer on back.

ExxonMobil
Chemical

Vistalon™ 5601

5601 A Metallocene EPDM for Molding and Extrusion

5601 in Peroxide Cure Automotive Hose



Vistalon™ ethylene-propylene rubber Technical Information

SULFUR CURE INDUSTRIAL HOSE

Ingredient, phr	5600	5601
Polymer	100	100
N650 GPF-HS Carbon Black	100	100
N762 SRF-LM Carbon Black	90	90
CaCO ₃	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 53.6 57.0		
Mooney Scorch (MS) at 132°C (270°F) – Large Rotor		
t10, min	9.2	8.9
ODR @ 170°C (338°F), 3 deg arc		
t90, min	5.2	5.2
MH-ML, dNm	47.4	55.5
Green Physical Properties – Uncured		
10% Modulus, MPa	96.7	103.7
50% Modulus, MPa	105.4	109.7
Press Cure, t90 + 4 min at 170°C (338°F)		
Hardness, Shore A	72	71
100% Modulus, MPa	3.4	3.4
200% Modulus, MPa	6.4	6.5
Tensile Strength, MPa	9.1	8.7
Elongation, %	359	366
Aged Properties, Press Cure, t90 + 4 min at 170°C, 70 hrs at 125°C		
Change in Hardness	6	5
Change in Tensile Strength, %	20.0	21.3
Change in Elongation, %	-54	-39
Compression Set		
72 hrs @ 23°C/25% Deflection, %	12	12
22 hrs @ 70°C/25% Deflection, %	11	7

PEROXIDE CURE BUILDING PROFILE

Ingredient, phr	5600	5601
Density	1.175	1.175
EPDM	100	100
N-550 FEF	135	135
Inorganic Filler – Omya BL (Wh)	20	20
Flexon 876	80	80
Perkadox 14-40 mb-Gr-40%	7	7
Rhenogran CaO-80	10	10
EDMA	2	2
Carbowax 3350	2	2
Formula Weight		356 356
Compound Mooney ML (1+4) @ 100°C on MV2000E		
ML (1+4), MU	66	69
MDR 12 min 0.5 Deg @ 180°C, EE		
MH-ML, dNm	14.8	15.8
ts2, min	0.7	0.7
t90, min	4.4	4.4
Garvey Extrusion 90-110°C 60 rpm		
Output, gr/min	69	83
Output, cm/min	350	311
Swell, %	8	31
Rating, ASTM	4444	4444
Hardness Shore A, EE 1.4 * Tc90 MDR, min 4'		
Hardness 30s	68	68
Rubber Tensile Test, EE 1.4 * Tc90 MDR, min 4'		
Mod 100%, MPa	3.1	3.3
Stress @ Break, MPa	11.9	12
Strain @ Break, %	334	332
Compression Set 22 hrs @ 100°C, 25% compr. 1.5 * 1.4 * Tc90 MDR, min 8'		
CS, %, 100°C	9	9
CS, %, 23°C	19	23
CS, %, -25°C	96	98
Aged 1 Week @ 100°C		
Hardness Shore A, EE 1.4 * Tc90 MDR, min 4'		
Change in Hardness, 30s	+2	+1
Rubber Tensile Test, EE 1.4 * Tc90 MDR, min 4'		
Mod 100%, MPa	3.2	3.2
Change in Strain @ Break, %	2.4	5.4

ExxonMobil
Chemical



vistalon.com

©2004 Exxon Mobil Corporation. The user may forward, distribute, and/or photocopy this copyrighted document only if unaltered and complete, including all of its headers, footers, disclaimers, and other information. You may not copy this document to a Web site. ExxonMobil does not guarantee the typical (or other) values. Typical values only represent the values one would expect if the property were tested in our laboratories with our test methods on the specified date. Some product properties are not frequently measured, and accordingly typical values are not based upon a statistically relevant number of tests. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, suitability, accuracy, reliability, or completeness of this information or the products, materials, or processes described. The user is solely responsible for all determinations regarding any use and any process. We expressly disclaim liability for any loss, damage, or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. There is no warranty against patent infringement, nor any endorsement of any product or process, and we expressly disclaim any contrary implication. The terms, "we," "our," "ExxonMobil Chemical," or "ExxonMobil" are used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates they directly or indirectly steward. ExxonMobil, the "Interlocking X" Device, Exxpol, and Vistalon are trademarks of Exxon Mobil Corporation.



興業塑膠五金製品廠

Hings Plastic & Metal Products Mfy.

Tel : (852) 2669 1939 E-mail : hingsmpm@hings.hk Fax : (852) 2669 1792

HINGS[®]
Elastomer
Systems



Plastic Wood Sealing Gasket Rubber Guard Rubber Tactile Safety Mat Expansion Joint

Material Safety Data Sheet

Product Name : Ethylene - Propylene - Diene - Monomer (EPDM)
 Rubber alloy : Polyethylene, Polypropylene approximately
 Hazard classification : Flammable

Physical Data

Density	:	1.3 to 1.4g/cc
Hardness	:	40° to 90° shore A
Brittleness Temperature	:	-45°C
Appearance	:	Black Color
Odor	:	No special odor

Ingredients

<u>Materials</u>	:	<u>Hazard</u>
Polyethylene	:	None
Polypropylene	:	None
Additions & Carbon Black (very small proportion)	:	None



Santoprene[®]
THERMOPLASTIC RUBBER
Advanced
Elastomer
Systems U.S.A.

香港九龍旺角新填地街594號興業樓2樓
 2/F., Hings Building, 594 Reclamation St., Mongkok, Kln., H.K.
 Website : www.hingsgroup.com

Värnamo[®]
Sealing Strip
The original from Sweden



興業塑膠五金製品廠

Hings Plastic & Metal Products Mfy.

Tel : (852) 2669 1939 E-mail : hingsmpm@hings.hk Fax : (852) 2669 1792

HINGS[®]
Elastomer
Systems



Plastic Wood Sealing Gasket Rubber Guard Rubber Tactile Safety Mat Expansion Joint

Acute skin	No.
Acute eyes	No.
Acute inhalation	No.
Acute ingestion	No swallowing
Personal Protection	wash hand after works

Fire Hazard

EPDM is slightly flammable, use dry chemical powder, foam, Carbon Dioxide, water fog and water as extinguishing media.

Storage Precaution

Store in room temperature, away from sources of fire.



Santoprene[®]
THERMOPLASTIC RUBBER
Advanced
Elastomer
Systems U.S.A.

香港九龍旺角新填地街594號興業樓2樓
2/F., Hings Building, 594 Reclamation St., Mongkok, Kln., H.K.
Website : www.hingsgroup.com

Värnamo[®]
Sealing Strip
The original from Sweden