



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 Foamed EPDM Rubber

Property	Unit	Value
Hardness	Shore 00	40°± 5°
Compression set, 22h @ 70°C	%	28
Compression - deflection 25 % deflection limits	Kpa	120
Heating aging, 70h @ 100°C Change in compression-deflection value	Kpa	+20
Dimensional stability, change after heat aging, 70h @ 100°C	%	3
Ozone resistance at 40% elongation, 100h @ 40°C		No Cracks
Low Temperature brittleness @ -40°C		Pass
Water absorption	%	4
Nonstaining		No migratory stain

- * "Hings" EPDM Foamed gasket is formulated to match ASTM C509 Designation.
- * Designation ASTM C509 is the standard specification for Elastomeric Cellular Performed Gasket and Sealing Materials.



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THERMOPLASTIC RUBBER
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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

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Sealing Strip
The original from Sweden



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香港九龍新填地街594號興業樓2樓
2/F., Hings Building, 594 Reclamation Street, Mongkok, Kowloon, H.K.
Tel: (852) 2669 1939 Fax: (852) 2669 1792

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To whom it may concern

Ref.: HS1015D

HINGS' Moulded and Extruded Rubber Products

- Brand : HINGS
- Fabricator : Hings Plastic & Metal Products Mfy.
- Material : Neoprene, EPDM, Silicone Rubber
- Hardness : 40 ±5 Shore 00
- Processing : Heat cured vulcanized
- Designation : ASTM-C542-90 ; For Lock-Strip Gaskets
: ASTM-C509-94 ; Elastomeric Cellular Preformed Gasket
and sealing
: ASTM-C864-05 ; Dense gaskets, setting blocks & spacers
: BS4225 Part 1 : 1996 ; rubber gaskets for weather exclusion
from building
: GB 10711 ; Vulcanized rubber for sealing and
weather gaskets for curtain wall (PRC)
- Profiles : Can be solid, semi-hollow, hollow, multi-hollow, single hardness
and dual hardness

* All rubber formulation are special designed to used as glazing, sealing, spacer,
location and setting block.

Best Regards.



15 OCT 2007

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UNIT 17-18, 4/F, SUN LING PLAZA, 30 ON KUI STREET,
ON LOK TSUEN, FANLING, N.T., HONG KONG.
TEL: (852) 2669-1939 FAX: (852) 2669-1792
Web-site: www.hingsgroup.com

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

To Whom it may concern

Re.: HINGS EPDM Foamed Tape

Single Side Adhesive Tape for Curtain Wall, Shopfront and Skylight

We notify that the above products are manufactured from Hings Plastic & Metal Products Mfy and tested to be compatible with all silicone sealant.

Application : Glazing, sealing and isolating.
Material : Ethylene-Propylene-Diene-Monomer
Brand : HINGS GASKET
Origin : Material from U.S.A.
Warranty : 10 years product life for Hings EPDM products.

Best Regards



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To whom it may concern

HINGS EPDM Foamed Tape **Application Guide**

Hings EPDM Foamed tape is a cellular semi-rigid closed cell material substrate with a pressure sensitive adhesive. Handling with care must be necessary and avoid with water and oil at anytime.

A). Factory application procedure

1. Contact surfaces must be thoroughly cleaned.
2. Tear-off the protective paper carefully, mounting surface and press the tape down securely. Don't touch the adhesive surface.
3. Make sure product is in contact with all surfaces and correct position. If unit is misaligned, remove the tape and replace for new one.
4. With contact to glass or aluminium, make sure all surfaces must be dried and clean, otherwise, clean it with xylol and thoroughly dried.
5. With best performance, all mounting surfaces should be flat, smooth and dry, without ribs or corrugation and parallel to one another.

B). Site application procedure

1. In order to develop adhesion the surfaces should be dry, free from dirt, dust or other contaminants, oil is prohibited on mounting surface.
2. Clean the surfaces with a cleaning solvent such as alcohol, acetone, trichloroethane or xylol.
3. Make sure no water and oil on mounting surfaces, paid attention to the application of the tape to ensure that complete contact of the surfaces is made, apply pressure to ensure the tape is fully adhead to material.
4. Do not remove the liner from the tape until ready to secure the second side. Once the tape is in place, apply pressure to ensure contact.

All the Hing's EPDM Foamed Tape tested to be compatible with Structural Sealant.



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Properties of Pressure Sensitive Adhesive for HINGES EPDM Foamed Tape

Specification for Acrylic acid emulsion pressure sensitive adhesive

Model and composition : T11 Acrylic acid emulsion pressure sensitive adhesive :

Specifications :

- * Apperance : milk white emulsion
- * Solid content : 55±1%
- * Viscosity : not less than 250cps (NDJ-1 viscometer, #1 mixer, 25°C)
- * Initial adhesion : not less than #14 steel ball (according to GB4852)
- * Peeling strength at 180° : not less than 6.5N/25mm (according to GB2792)
- * Duration of adhesion : not less than 360 minutes (according to GB4851)

Test condition : 23±2°C , 60±5% RH



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

Formulation and Constitute of EPDM Rubber (Ethylene Propylene Diene Rubber)

<u>MATERIAL</u>	<u>PHR</u>
Vistalon 5600	100.00
N-550 Black	100.00
N-774 Black	100.00
Naphthenic Oil	100.00
Zinc Oxide	5.00
Stearic Acid	2.00
Flectol H	1.00
Sulfur	2.00
Thiotax	1.50
TDADC	0.80
DPTTS	0.80
Thiurad	0.80
	<hr/>
	413.90



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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.



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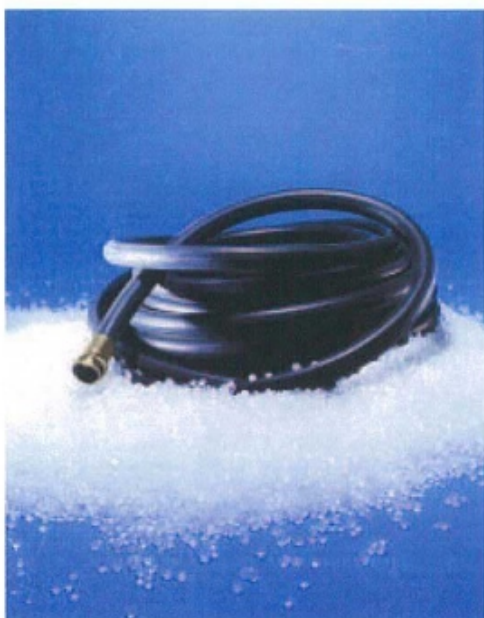
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Vistalon™

5601

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.



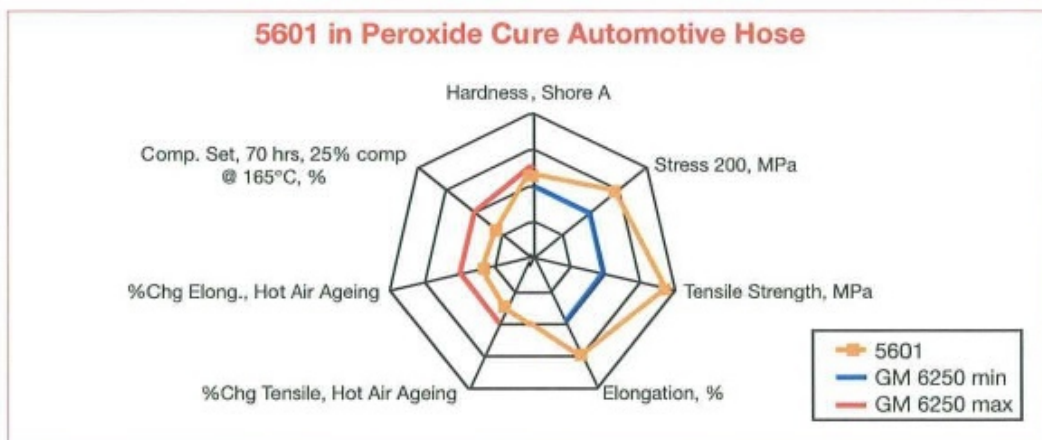
Important information and disclaimer on back.

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	5600	5601
	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		
Hardness 30s	1.4 * Tc90 MDR, min 4'	68

Rubber Tensile Test, EE		
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		
Mod 100%, MPa	3.2	3.2
Change in Strain @ Break, %	2.4	5.4

ExxonMobil
Chemical



vistalon.com

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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 ±5 Shore 00
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



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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 tog and water as extinguishing media.

Storage Precaution

Store in room temperature, away from sources of fire.





興業連氏有限公司
Hingslin And Company Ltd.

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E-mail : hingsmp@hings.hk

Fax : (852) 2669 1792

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環 保 橡 膠
外 橡 膠 系
工 程 橡 膠
戶 建 安
安 全 系 列

Certificate No. : HS0311B

Manufacturer Certificate

*This is to certify that Hings Plastic & Metal Products Mfy
{manufacturing representative of HINGS EPDM Foamed Gaskets } has supplied*

Company : Program International Ltd.

Project : 1551

Product : P1551-SK-1, SK-2, PG-7021 & FDI-A

Hardness 40 ±5 Shore 00

Color : Black

Quantity : 50 M / ea.

Delivery 25 Dec, 2012 to 28 Feb, 2013



In accordance with the Designation : **ISO 9001 : 2008**

ASTM C509-94

Warranty : 15 years



12 MAR 2013

Signature
THERMOPLASTIC RUBBER
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美國新都平熱塑性橡膠

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

Job Reference for EPDM Rubber

1. Tai Kok Tsui - Site B
Tri-Tech Metals Co., Ltd.
2. No. 21 D'Aguilar Street, Central, Hong Kong
O & T Contracting Co., Ltd.
3. Cheung Kong Centre - Footbridge
Josef Gartner & Co., (HK) Ltd.
4. TBM Gantry Grane Rail - (P-verman)
Dragages - Zen Pacific Joint Vernture
5. West Kowloon Reclamation Remaining Road Works Stage 2
Ecotech Pacific Ltd.
6. 1063 King's Road, Quarry Bay, Hong Kong
MBM (HK) Ltd.
7. Tseung Kwan O, TVB City
Midi Aluminium Fabricator Ltd.
8. KCRC CC603
Shun Wing Engineering Co., Ltd.
9. Integer Hong Kong Pavilion
Far East Aluminium Works Co., Ltd.
10. 141-149 Thomson Road, Wan Chai
Permasteelisa H.K. Ltd.
11. No.2 Stafford Road, Kowloon Tong
Builders Federal (HK) Ltd.
12. Hong Kong University
Josef Gartner & Co., (HK) Ltd.
13. LV Manhasset, U.S.A.
Josef Gartner & Co., (HK) Ltd.
14. 11 Chater Road Podium
Josef Gartner & Co., (HK) Ltd.



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Job Reference for EPDM Rubber

15. Science Park, Pak Shek Kok, Tai Po
Far East Aluminium Works Co., Ltd.
16. Cambridge House, Quarr Bay, Hong Kong
Far East Aluminium Works Co., Ltd.
17. Cyberport Development Contract C5 Hotel
Far East Aluminium Works Co., Ltd.
18. Ura Dev. Scheme K2, Site A & Site B
Far East Aluminium Works Co., Ltd.
19. Siu Ho Wan Treatment Works
Unison Projects Co., Ltd.
20. Aldrich Bay, Hong Kong
KPA Engineering Ltd.
21. Crown Macau
PMB - Cyberwall Ltd.
22. Liu Chong Hing Bank Building, Central
Josef Gartner & Co., (HK) Ltd.
23. Landmark Phase 6
United Reliance Corporation Ltd.
24. Happy Valley
G & M Engineering Ltd.
25. Lane Crawford
Chan Ying Metal Works Ltd.
26. Chanel Lee Garden
Gartner Contracting Co., Ltd.
27. Princess Margaret Hospital
PMB - Cyberwall Ltd.
28. Fanling Highway
Leader - Wai Kee (C & T) J.V.
29. One Island East, Quarry Bay
30. One Central Macau



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