

Vistamaxx™ 3020FL

Propylene-based Elastomer

| Product Description | Key Features |
|--|---|
| Vistamaxx 3020FL propylene-based elastomer is an olefinic elastomer primarily composed of isotactic propylene repeat units with random ethylene distribution. It is produced using ExxonMobil Chemical's EXXPOL™ Catalyst Technology. The 'FL' designates this is a high purity grade with very low gel content, making it suitable for premium and performance film and molding applications. | <ul style="list-style-type: none"> • Suitable for a wide range of blown film and molding applications where improved melt strength is desired. • Can be blended with PP, PE and other polyolefins. • Excellent toughness in terms of tear and puncture resistance with good processability for stretch hood cores. • Good optical properties. • Good sealing properties. • Good organoleptic properties. • Good chemical resistance to aqueous systems and non-hydrocarbon based fluids. • May be used in food contact applications (see FDA and EU notes). • EU and China RoHS compliant. |

General

| | | | |
|---------------------------|--|---|--|
| Availability ¹ | <ul style="list-style-type: none"> • Africa & Middle East • Asia Pacific | <ul style="list-style-type: none"> • Europe • Latin America | <ul style="list-style-type: none"> • North America • South America |
| Applications | <ul style="list-style-type: none"> • Blown Film • Compounding | <ul style="list-style-type: none"> • Molding • Polymer Modification | |
| Uses | <ul style="list-style-type: none"> • Compounding | <ul style="list-style-type: none"> • Film | <ul style="list-style-type: none"> • Packaging |
| Agency Ratings | <ul style="list-style-type: none"> • EU 2002/72/EC | | |
| RoHS Compliance | <ul style="list-style-type: none"> • RoHS Compliant | | |
| Form(s) | <ul style="list-style-type: none"> • Pellets | | |
| Revision Date | <ul style="list-style-type: none"> • 08/17/2009 | | |

| Physical | Typical Value (English) | Typical Value (SI) | Test Based On |
|---|-------------------------|-------------------------|-------------------|
| Density | 0.874 g/cm ³ | 0.874 g/cm ³ | ASTM D1505 |
| Melt Index ² | 0.90 g/10 min | 0.90 g/10 min | ExxonMobil Method |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 2.2 g/10 min | 2.2 g/10 min | ASTM D1238 |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 2.2 g/10 min | 2.2 g/10 min | ISO 1133 |
| Ethylene Content | 10.5 wt% | 10.5 wt% | ASTM D3900 |

| Hardness | Typical Value (English) | Typical Value (SI) | Test Based On |
|---------------------------------------|-------------------------|--------------------|---------------|
| Shore Hardness (Shore A, 73°F (23°C)) | 85 | 85 | ISO 868 |

| Mechanical | Typical Value (English) | Typical Value (SI) | Test Based On |
|--|-------------------------|--------------------|---------------|
| Flexural Modulus - 1% Secant (73°F (23°C)) | 8760 psi | 60.4 MPa | ASTM D790 |
| Flexural Modulus - 1% Secant (73°F (23°C)) | 8760 psi | 60.4 MPa | ISO 178 |

| Elastomers | Typical Value (English) | Typical Value (SI) | Test Based On |
|--------------------------------------|-------------------------|--------------------|---------------|
| Tensile Set (73°F (23°C)) | 49 % | 49 % | ASTM D412 |
| Tensile Set (73°F (23°C)) | 49 % | 49 % | ISO 2285 |
| Tensile Stress at 100% (73°F (23°C)) | 638 psi | 4.40 MPa | ASTM D412 |

Typical properties: these are not to be construed as specifications.

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ExxonMobil Chemical Vistamaxx™ 3020FL Propylene-based Elastomer

| Elastomers | Typical Value (English) | Typical Value (SI) | Test Based On |
|---|-------------------------|--------------------|---------------|
| Tensile Stress at 100% (73°F (23°C)) | 638 psi | 4.40 MPa | ISO 37 |
| Tensile Stress at 300% (73°F (23°C)) | 653 psi | 4.50 MPa | ASTM D412 |
| Tensile Stress at 300% (73°F (23°C)) | 653 psi | 4.50 MPa | ISO 37 |
| Tensile Strength at Break (73°F (23°C)) | 2580 psi | 17.8 MPa | ASTM D412 |
| Tensile Stress at Break (73°F (23°C)) | 2580 psi | 17.8 MPa | ISO 37 |
| Elongation at Break (73°F (23°C)) | 1800 % | 1800 % | ASTM D412 |
| Tensile Strain at Break (73°F (23°C)) | 1800 % | 1800 % | ISO 37 |
| Tear Strength (73°F (23°C), Die C) | 365 lbf/in | 64.0 kN/m | ASTM D624 |
| Tear Strength 73°F (23°C), Method Bb, Angle (Nicked) | 370 lbf/in | 64 kN/m | ISO 34-1 |

| Thermal | Typical Value (English) | Typical Value (SI) | Test Based On |
|--|-------------------------|--------------------|-------------------|
| Vicat Softening Temperature | 158 °F | 70.0 °C | ASTM D1525 |
| Vicat Softening Temperature | 158 °F | 70.0 °C | ISO 306/A |
| Peak Crystallization Temperature (DSC) | 149 °F | 65.0 °C | ASTM D3418 |
| Peak Crystallization Temperature | 149 °F | 65 °C | ISO 11357-3 |
| Crystallinity, Hf | 28.0 J/g | 28.0 J/g | ExxonMobil Method |
| Crystallization Peak, Tc | 64 °F | 18 °C | ExxonMobil Method |

Additional Information

All physical properties were measured on specimens cut from compression molded plaques per ASTM D 4703, Procedure A, Type I and conditioned at 23°C (73°F) for a minimum of 40 hours per ASTM D 618 prior to testing. All stress/strain tests used specimens cut with a Type C die and tested with a grip separation of 25 mm (1") and a crosshead speed of 20 in/min. Tensile set was determined from a specimen held at 100% strain for 10 minutes and allowed to rest for 10 minutes.

FDA NOTE: In accordance with FDA Food Contact Notification (FCN) Number 832, this product, as manufactured, may be used in food contact applications as components of articles in contact with all food types under all temperature conditions up to and including boiling water sterilization.

EU NOTE: The composition of this product complies with the requirements for use in contact with food of the EU Directive 2002/72/EC. Please contact Customer Service for the official food law certificates which provide more detailed information.

For information specific to product handling and storage, refer to the TechNote, "Vistamaxx Propylene-based Elastomer Guidelines for Storage and Handling". For data specific to chemical resistance, refer to the Technical Literature (TL), "Chemical Resistance of Vistamaxx Propylene-based Elastomers".

Legal Statement

For detailed Product Stewardship information, please contact Customer Service.

This product, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use.

Processing Statement

Vistamaxx propylene-based elastomer has a wide temperature processing window. A good starting point for temperatures is 10°C above the highest melting point. This material does not require drying and can be compounded or used in a dry blend. Use conventional processing knowledge to ensure mixing of the materials.

Notes

¹ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

² Value reported is an estimate based on ExxonMobil's correlation from melt flow rate data measured at other standard conditions, based on ASTM D 1238.

Typical properties: these are not to be construed as specifications.

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