

# Exxpro™ 3745

## Specialty Elastomer

### Product Description

Exxpro™ specialty elastomer 3745 is a brominated copolymer of isobutylene and paramethylstyrene. Exxpro™ specialty elastomer is a trademark designating a series of polymers made by brominating a copolymer of isobutylene and paramethylstyrene.

### Key Features

Exxpro™ specialty elastomer 3745 has no unsaturation on the backbone of the polymer chain. Having a completely saturated backbone, this polymer is more heat and ozone stable than butyl or halobutyl rubbers. It contains no antioxidants or other stabilizers. This specialty elastomer has superior air barrier properties than the butyl and halobutyl grades. The most important end uses of this grade are automotive hose, pharmaceutical, tire sidewall and mechanical goods.

### General

|                           |                                                                                                                                |                                                                                 |                                                                 |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Availability <sup>1</sup> | <ul style="list-style-type: none"> <li>Africa &amp; Middle East</li> <li>Asia Pacific</li> </ul>                               | <ul style="list-style-type: none"> <li>Europe</li> <li>Latin America</li> </ul> | <ul style="list-style-type: none"> <li>North America</li> </ul> |
| Appearance                | <ul style="list-style-type: none"> <li>Off-White to light amber in color; marbled appearance, free of contamination</li> </ul> |                                                                                 |                                                                 |
| Form(s)                   | <ul style="list-style-type: none"> <li>Bale</li> </ul>                                                                         |                                                                                 |                                                                 |
| Revision Date             | <ul style="list-style-type: none"> <li>02/06/2023</li> </ul>                                                                   |                                                                                 |                                                                 |

### Resin Properties

|                                                       | Typical Value (English) | Typical Value (SI)     | Test Based On     |
|-------------------------------------------------------|-------------------------|------------------------|-------------------|
| Density                                               | 0.94 g/cm <sup>3</sup>  | 0.94 g/cm <sup>3</sup> | ASTM D297         |
| Mooney Viscosity <sup>2</sup> (ML 1+8, 257°F (125°C)) | 45 MU                   | 45 MU                  | ASTM D1646 (mod)  |
| Bromine                                               | 2.3 wt%                 | 2.3 wt%                | ExxonMobil Method |
| Bromine, Benzylic                                     | 1.20 mol%               | 1.20 mol%              | ExxonMobil Method |
| Calcium                                               | 0.09 wt%                | 0.09 wt%               | ExxonMobil Method |
| Water                                                 | 0.3 wt% max             | 0.3 wt% max            | ExxonMobil Method |
| Volatiles                                             | < 0.6 wt%               | < 0.6 wt%              | ASTM D5668 (mod)  |
| Ash                                                   | < 0.4 wt%               | < 0.4 wt%              | ASTM D5667 (mod)  |

### Cure Characteristics (Rheometer)

|                              | Typical Value (English) | Typical Value (SI) | Test Based On |
|------------------------------|-------------------------|--------------------|---------------|
| ts <sup>2</sup> <sup>3</sup> | 2.9 min                 | 2.9 min            | ASTM D5289    |
| t'50 <sup>3</sup>            | 4.3 min                 | 4.3 min            | ASTM D5289    |
| t'90 <sup>3</sup>            | 9.1 min                 | 9.1 min            | ASTM D5289    |
| Minimum Torque <sup>3</sup>  | 2.7 dN·m                | 2.7 dN·m           | ASTM D5289    |
| Maximum Torque <sup>3</sup>  | 16.5 dN·m               | 16.5 dN·m          | ASTM D5289    |

### Additional Information

Storage: All inventory must be stored in dry conditions in an enclosed warehouse, protected from contaminants, and outdoor light exposure (including during shipment and transfers). Shipping Policy: 4 years from date of production. Packaging: 34 +/-0.68 kg bales in dispersible EVA film or release film, in metal crates of 36 bales (1224 kgs). For material with dispersible film wrap, Vicat softening point less than or equal to 85°C (ASTM 1525-87).

### Legal Statement

For detailed product compliance information, please contact customer Service.

This product is not intended for use in food contact applications.

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

**Exxpro™ 3745**  
Specialty Elastomer**Notes**

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

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

<sup>2</sup> MV 2000 or equivalent

<sup>3</sup> Rotor less curemeter (cure conditions - 160°C, 30 min; preheat - none; oscillation - 1.7 Hz, Arc  $\pm 0.5^\circ$ ), Standard compound: ASTM D3958 (Test Formulation - Exxpro™ 3745 (100 phr), Carbon black IRB 8 (40 phr), Zinc Oxide IRM 91 (1 phr), Stearic Acid IRM 021 (2 phr), Zinc Stearate (USPZ784-500) (1 phr), mill mixed compound)

For additional technical, sales and order assistance: [www.exxonmobilchemical.com/ContactUs](http://www.exxonmobilchemical.com/ContactUs)

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