

# Trexprene® A88BU

Thermoplastic Vulcanizate

Mitsubishi Chemical Performance Polymers, Inc.

## Message:

Product Description: TREXPENE ® A88BU is a heat stabilized PP/EPDM based Thermoplastic Vulcanized Elastomer (TPV). This Black compound is intended primarily for underhood applications such as mats, seals, gaskets, air ducts, CVJ boots, covers, grommets or other parts where softness and conformity are needed. This material can be processed using Injection Molding, Extrusion, Blow Molding or other melt processing techniques.

| General Information                                     |                               |                   |             |
|---|-------------------------------|-------------------|-------------|
| Additive  | Heat Stabilizer               |                   |             |
| Features  | Heat Stabilized               |                   |             |
|   | Soft                          |                   |             |
| Uses  | Automotive Under the Hood     |                   |             |
|   | Constant Velocity Joint Boots |                   |             |
|   | Gaskets                       |                   |             |
|   | Grommets                      |                   |             |
|   | Protective Coverings          |                   |             |
|   | Seals                         |                   |             |
| Appearance  | Black                         |                   |             |
| Forms   | Pellets                       |                   |             |
| Processing Method                                       | Blow Molding                  |                   |             |
|   | Extrusion                     |                   |             |
|   | Injection Molding             |                   |             |
| Physical  | Nominal Value                 | Unit              | Test Method |
| Density   | 0.930 to 0.990                | g/cm <sup>3</sup> | ISO 1183    |
| Hardness  | Nominal Value                 | Unit              | Test Method |
| Shore Hardness (Shore A, 15 sec)                        | 86 to 92                      |                   | ISO 868     |
| Elastomers  | Nominal Value                 | Unit              | Test Method |
| Tensile Stress - Across Flow <sup>1</sup> (100% Strain) | 6.50                          | MPa               | ISO 37      |
| Tensile Stress - Across Flow <sup>2</sup> (Yield)       | 12.3                          | MPa               | ISO 37      |
| Tensile Elongation - Across Flow <sup>3</sup> (Break)   | 710                           | %                 | ISO 37      |
| Tear Strength - Across Flow <sup>4</sup>                | 50                            | kN/m              | ISO 34-1    |
| Compression Set   |                               |                   |             |
| 125°C, 70 hr  | 62                            | %                 | ASTM D395B  |
| 125°C, 70 hr <sup>5</sup>                               | 62                            | %                 | ISO 815     |
| Aging   | Nominal Value                 | Unit              | Test Method |
| Change in Tensile Strength in Air                       |                               |                   | ISO 188     |
| 135°C, 1000 hr  | 6.0                           | %                 |             |

| 150°C, 168 hr  | -1.1                                    | %    |             |
|--|---|------|-------------|
| Change in Tensile Strain at Break in Air                         |   |      | ISO 188     |
| 135°C, 1000 hr   | -19                                     | %    |             |
| 150°C, 168 hr  | -15                                     | %    |             |
| Change in Tensile Stress (125°C, 70 hr, in IRM 903 Oil)          | -30                                     | %    | ISO 1817    |
| Change in Tensile Strain at Break (125°C, 70 hr, in IRM 903 Oil) | -52                                     | %    | ISO 1817    |
| Change in Volume (125°C, 70 hr, in IRM 903 Oil)                  | 65                                      | %    | ISO 1817    |
| Change in Tear Strength - 70 hrs, in IRM 903 Oil (125°C)         | -50                                     | %    | ISO 1817    |
| Change in Tensile Properties                                     |   |      |             |
| Stress at 100% Elongation in Air, 168 hrs : 150°C                | 15                                      | %    | ISO 188     |
| Stress at 100% Elongation in IRM 903 Oil, 70 hrs : 125°C         | < -9.0                                  | %    | ISO 1817    |
| Ozone Resistance (40°C) <sup>6</sup>                             | 0 Rating                                |      | ISO 1431-1  |
| Thermal  | Nominal Value                           | Unit | Test Method |
| Brittleness Temperature  |   |      |             |
| --   | -50.0                                   | °C   | ASTM D746   |
| Type B   | -50.0                                   | °C   | ISO 812     |
| NOTE   |   |      |             |
| 1.   | Type 1, 500 mm/min                      |      |             |
| 2.   | Type 1, 500 mm/min                      |      |             |
| 3.   | Type 1, 500 mm/min                      |      |             |
| 4.   | Method Ba, Angle (Unnicked), 500 mm/min |      |             |
| 5.   | Type A                                  |      |             |
| 6.   | 100 pphm, Method A                      |      |             |

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