



# OnFlex™-V 2090A-E0268

## Thermoplastic Vulcanizate

### Key Characteristics

#### Product Description

OnFlex™-V provides the performance of traditional vulcanised rubber, but with the processability of a thermoplastic. OnFlex™-V 2000 series thermoplastic elastomer compounds are based on a polyolefin phase with a cross-linked EPDM phase dispersed within it. This range of compounds are specially formulated for extrusion processes, providing a good surface quality and throughput. In addition to this, OnFlex™-V 2000 series thermoplastic elastomer compounds provide excellent colourability (low yellowness), good mechanical properties, excellent flexibility over a wide temperature range, a wide hardness range, and good hydrocarbon and heat ageing resistance.

#### General

|                       |                                                          |                                                |                             |
|-----------------------|----------------------------------------------------------|------------------------------------------------|-----------------------------|
| Material Status       | • Commercial: Active                                     |                                                |                             |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific                 | • Europe<br>• North America                    | • South America             |
| Features              | • General Purpose                                        |                                                |                             |
| Uses                  | • Automotive Applications<br>• Construction Applications | • General Purpose<br>• Industrial Applications | • Wire & Cable Applications |
| RoHS Compliance       | • RoHS Compliant                                         |                                                |                             |
| Forms                 | • Pellets                                                |                                                |                             |
| Processing Method     | • Extrusion                                              |                                                |                             |

### Technical Properties <sup>1</sup>

| Physical                                | Typical Value (English) | Typical Value (SI)      | Test Method |
|-----------------------------------------|-------------------------|-------------------------|-------------|
| Density                                 | 0.960 g/cm <sup>3</sup> | 0.960 g/cm <sup>3</sup> | ISO 1183    |
| Elastomers                              | Typical Value (English) | Typical Value (SI)      | Test Method |
| Tensile Stress (100% Strain)            | 725 psi                 | 5.00 MPa                | ISO 37      |
| Tensile Stress (300% Strain)            | 1100 psi                | 7.60 MPa                | ISO 37      |
| Tensile Stress (Break)                  | 2230 psi                | 15.4 MPa                | ISO 37      |
| Tensile Elongation (Break)              | 550 %                   | 550 %                   | ISO 37      |
| Tear Strength                           | 320 lbf/in              | 57 kN/m                 | ISO 34-1    |
| Compression Set                         |                         |                         | ISO 815     |
| 73°F (23°C), 72.0 hr                    | 37 %                    | 37 %                    |             |
| 158°F (70°C), 22.0 hr                   | 53 %                    | 53 %                    |             |
| 212°F (100°C), 22.0 hr                  | 56 %                    | 56 %                    |             |
| Hardness                                | Typical Value (English) | Typical Value (SI)      | Test Method |
| Shore Hardness (Shore A)                | 90                      | 90                      | ISO 868     |
| Flammability                            | Typical Value (English) | Typical Value (SI)      | Test Method |
| Flame Rating - UL (0.0591 in (1.50 mm)) | HB                      | HB                      | UL 94       |
| Oxygen Index                            | 19 %                    | 19 %                    | ISO 4589-2  |

#### Additional Properties

Tensile properties are measured on an extruded profile.

### Processing Information

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 176 °F                  | 80.0 °C            |
| Drying Time            | 3.0 hr                  | 3.0 hr             |
| Processing (Melt) Temp | 356 to 410 °F           | 180 to 210 °C      |
| Mold Temperature       | 86.0 to 140 °F          | 30.0 to 60.0 °C    |
| Injection Rate         | Fast                    | Fast               |

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**Notes**

<sup>1</sup> Typical values are not to be construed as specifications.

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