

# Viprene™ G80A-32U-BLK

## Alliance Polymers & Services - Thermoplastic Vulcanizate

### General Information

#### Product Description

Viprene™ G80A-32U-BLK is a UV and Heat Stabilized TPV (thermoplastic vulcanizate elastomer). This material can be easily processed by extrusion or injection molding. It exhibits easy flowing characteristics.

#### General

|                   |                   |                     |                |
|-------------------|-------------------|---------------------|----------------|
| Additive          | • Heat Stabilizer | • UV Stabilizer     |                |
| Features          | • Good Flow       | • Heat Stabilized   | • UV Resistant |
| Appearance        | • Black           |                     |                |
| Forms             | • Pellets         |                     |                |
| Processing Method | • Extrusion       | • Injection Molding |                |

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

| Physical                       | Nominal Value | Unit              | Test Method |
|--------------------------------|---------------|-------------------|-------------|
| Density                        | 0.970         | g/cm <sup>3</sup> | ISO 2781    |
| Elastomers                     | Nominal Value | Unit              | Test Method |
| Tensile Stress (100% Strain)   | 493           | psi               | ISO 37      |
| Tensile Stress (300% Strain)   | 696           | psi               | ISO 37      |
| Tensile Stress (Break)         | 1420          | psi               | ISO 37      |
| Tensile Elongation (Break)     | 550           | %                 | ISO 37      |
| Tear Strength                  | 291           | lbf/in            | ISO 34-1    |
| Compression Set (158°F, 22 hr) | 45            | %                 | ASTM D395B  |
| Hardness                       | Nominal Value | Unit              | Test Method |
| Shore Hardness (Shore A)       | 80            |                   | ISO 868     |
| Thermal                        | Nominal Value | Unit              | Test Method |
| Brittleness Temperature        | -76.0         | °F                | ASTM D746   |
| Flammability                   | Nominal Value | Unit              | Test Method |
| Flame Rating                   |               |                   | UL 94       |
| 0.04 in                        |               | HB                |             |
| 0.06 in                        |               | HB                |             |
| 0.12 in                        |               | HB                |             |

### Processing Information

| Injection              | Nominal Value | Unit                 |
|------------------------|---------------|----------------------|
| Drying Temperature     | 176           | °F                   |
| Drying Time            | 3.0           | hr                   |
| Rear Temperature       | 356           | °F                   |
| Middle Temperature     | 365           | °F                   |
| Front Temperature      | 374           | °F                   |
| Nozzle Temperature     | 383 to 437    | °F                   |
| Processing (Melt) Temp | 392 to 446    | °F                   |
| Mold Temperature       | 50 to 122     | °F                   |
| Back Pressure          | 72.5 to 123   | psi                  |
| Screw Speed            | 100 to 200    | rpm                  |
| Clamp Tonnage          | 2.9 to 5.1    | tons/in <sup>2</sup> |

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### Injection Notes

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Injection Speed: 50 mm/sec or more

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### Extrusion

|                       | Nominal Value | Unit |
|-----------------------|---------------|------|
| Drying Temperature    | 176           | °F   |
| Drying Time           | 3.0           | hr   |
| Cylinder Zone 1 Temp. | 356           | °F   |
| Cylinder Zone 2 Temp. | 374           | °F   |
| Cylinder Zone 3 Temp. | 383           | °F   |
| Die Temperature       | 401           | °F   |

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### Extrusion Notes

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Gate Temperature: 200°C (392°F)

Die Pressure: 4.8 to 17 MPa (696 to 2465 psi)