



## EZPRENE® 9050D

ENPLAST Americas, a Ravago Group Company - Thermoplastic Vulcanizate

Wednesday, November 6, 2019

### General Information

#### Product Description

50 Shore D TPE (Thermoplastic Vulcanizate). Available in black, natural or pre-colored for injection molding and extrusion applications. This rigid material is non-hygroscopic and offers excellent chemical resistance and physical properties. EZPrene is polyolefin based and is 100% recyclable.

#### General

|                   |                      |                              |                       |
|-------------------|----------------------|------------------------------|-----------------------|
| Material Status   | • Commercial: Active |                              |                       |
| Availability      | • North America      |                              |                       |
| Features          | • Chemical Resistant | • High Rigidity              | • Ozone Resistant     |
|                   | • Good Adhesion      | • Low Die Swell              | • Recyclable Material |
|                   | • Good Colorability  | • Low to No Water Absorption | • UV Resistant        |
| Appearance        | • Black              | • Colors Available           | • Natural Color       |
| Processing Method | • Extrusion          | • Injection Molding          |                       |

### ASTM & ISO Properties <sup>1</sup>

| Physical                         | Nominal Value | Unit   | Test Method |
|----------------------------------|---------------|--------|-------------|
| Density / Specific Gravity       | 0.962         |        | ASTM D792   |
| Elastomers                       | Nominal Value | Unit   | Test Method |
| Tensile Stress (100% Strain)     | 1710          | psi    | ASTM D412   |
| Tensile Strength (Break)         | 3260          | psi    | ASTM D412   |
| Tensile Elongation (Break)       | 750           | %      | ASTM D412   |
| Tear Strength                    | 520           | lbf/in | ASTM D624   |
| Compression Set                  |               |        | ASTM D395   |
| 73°F, 22 hr                      | 70            | %      |             |
| 257°F, 70 hr                     | 80            | %      |             |
| Hardness                         | Nominal Value | Unit   | Test Method |
| Durometer Hardness               |               |        | ASTM D2240  |
| Shore D, 5 sec, Extruded         | 49            |        |             |
| Shore D, 5 sec, Injection Molded | 50            |        |             |
| Thermal                          | Nominal Value | Unit   | Test Method |
| Brittleness Temperature          | -22.0         | °F     | ASTM D746   |
| Dynamic Service Temperature      | 266           | °F     |             |
| Additional Information           | Nominal Value | Unit   | Test Method |
| Ozone Resistance                 | Excellent     |        | ASTM D1149  |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 180           | °F   |
| Drying Time            | 2.0 to 3.0    | hr   |
| Rear Temperature       | 375 to 400    | °F   |
| Middle Temperature     | 385 to 410    | °F   |
| Front Temperature      | 385 to 410    | °F   |
| Nozzle Temperature     | 410 to 430    | °F   |
| Processing (Melt) Temp | 390 to 430    | °F   |
| Mold Temperature       | 75 to 125     | °F   |
| Injection Pressure     | 750 to 1300   | psi  |

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| Injection      | Nominal Value  | Unit                 |
|----------------|----------------|----------------------|
| Injection Rate | Fast           |                      |
| Screw Speed    | 50 to 200      | rpm                  |
| Clamp Tonnage  | 2.0 to 3.5     | tons/in <sup>2</sup> |
| Cushion        | 0.200 to 0.500 | in                   |

## Injection Notes

Holding Time: 5 to 7 Sec.  
Cooling Time: 30 to 50 Sec.

| Extrusion             | Nominal Value | Unit |
|-----------------------|---------------|------|
| Hopper Temperature    | 330 to 350    | °F   |
| Cylinder Zone 1 Temp. | 340 to 375    | °F   |
| Cylinder Zone 2 Temp. | 340 to 375    | °F   |
| Cylinder Zone 3 Temp. | 340 to 375    | °F   |
| Cylinder Zone 4 Temp. | 340 to 375    | °F   |
| Cylinder Zone 5 Temp. | 340 to 375    | °F   |
| Adapter Temperature   | 375 to 410    | °F   |
| Melt Temperature      | 375 to 390    | °F   |
| Die Temperature       | 375 to 410    | °F   |
| Screw L/D Ratio       | 24.0:1.0      |      |

## Extrusion Notes

Compression Zone: 355 - 390°F (180 - 200°C)  
Metering Zone: 375 to 410°F (190 to 210°C)  
Screw Speed: 30 - 80 rpm  
Screen Pack: 20/40/60

## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.