



SANTOPRENE® 101-80 ECO-R

SANTOPRENE®

A soft, black, versatile thermoplastic vulcanizate (TPV) grade in the thermoplastic elastomer (TPE) family made using minimum 15% post-consumer recycled (PCR) materials. It is a general-purpose product well suiting needs of extrusion, co-extrusion applications, particularly that of static foot of automotive weather seal systems like glass run channels. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for extrusion or thermoforming. It is polyolefin based and recyclable within the manufacturing stream.

Product information

| Resin Identification | TPV | ISO 1043 |
|----------------------|-------|-----------|
| Part Marking Code | >TPV< | ISO 11469 |

Typical mechanical properties

| Tensile stress at 100% elongation, perpendicular | 4.5 | MPa | ISO 37 |
|--|-----|------|------------------------|
| Tensile stress at break, perpendicular | 8.7 | MPa | ISO 527-1/-2 or ISO 37 |
| Elongation at break, perpendicular | 560 | % | ISO 527-1/-2 or ISO 37 |
| Shore A hardness, 15s | 83 | | ISO 48-4 / ISO 868 |
| Compression set, 23°C, 24h | 26 | % | ISO 815 |
| Compression set, 70°C, 24h | 38 | % | ISO 815 |
| Initial Tear Resist., Die C | 42 | kN/m | ISO 34-1 |

Physical/Other properties

| Density | 974 kg/m ³ | ISO 1183 |
|---------|-----------------------|----------|
| | | |

Injection

| Drying Recommended | yes |
|---------------------------------|---------|
| Drying Temperature | 80 °C |
| Drying Time, Dehumidified Dryer | ≥3 h |
| Processing Moisture Content | ≤0.08 % |
| Melt Temperature Optimum | 205 °C |
| Min. melt temperature | 190 °C |
| Max. melt temperature | 220 °C |
| Mold Temperature Optimum | 30 °C |
| Min. mould temperature | 10 °C |
| Max. mould temperature | 50 °C |

Extrusion

| Drying Temperature | 82 | °C |
|---------------------------------|-----------|----|
| Drying Time, Dehumidified Dryer | 3 I | h |
| Melt Temperature Range | 175 - 205 | °C |

Characteristics

Processing Injection Moulding, Multi Injection Moulding, Extrusion, Sheet Extrusion,

Coextrusion, Other Extrusion, Calendering, Thermoforming, Compression moulding,

Foam processing

Delivery form Pellets

Sustainability Recycled Content

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Additional information

Injection molding Holding pressure should be about 50 to 75% of the actual injection pressure.

A high screw RPM (100 to 200) is recommended.

Back pressure is not always needed, however, a back pressure of 0.3 to 0.7 MPa may be used to ensure a homogeneous melt and maintain a consistent shot size. A higher back pressure is normally employed when using masterbatches.

Processing Notes

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Desiccant drying for 3 hours at 80°C (180°F) is recommended. Santoprene® TPV has a wide temperature processing window from 175 to 230°C (350 to 450°F) and is incompatible with acetal and PVC.

Santoprene® TPV has a relatively high melt viscosity at low shear rates. Viscosity decreases as the shear rate increases.

Increasing temperature has little effect on TPV melt viscosity. Smaller gates and higher shear rates keep melt viscosity low and improve melt flow. Please also refer to the injection molding guide.

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