



TPSiV[®] 4100-60A Thermoplastic Elastomer

FEATURES & BENEFITS

- Soft silky feel
- Excellent abrasion and scratch resistance
- Excellent bonding to PC, ABS
- Low compression set

TPSiV[®] 4100-60A Thermoplastic Elastomer is a thermoplastic elastomer with superior compression set and mechanical properties with excellent bonding to polycarbonate, ABS, and similar polar substrates.

APPLICATIONS

- Solution for water resistant seals on battery covers.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

| Test* | Property | Unit | Result |
|------------|----------------------------------|-------------|--------|
| ISO 868 | Hardness (15 seconds) | Shore A | 60 |
| ISO 1183 | Specific Gravity | | 1.18 |
| ISO 1133 | Melt Flow Index 10 kg & 190°C | g/10 min | 10 |
| | Mold Shrinkage | % | 1–3 |
| ISO 37 | Tensile Strength | MPa | 9.4 |
| ISO 37 | Tensile Stress @ 100% Elongation | MPa | 2 |
| ISO 37 | Elongation | % | 950 |
| ISO 178 | Flexural Strength | MPa | 1.5 |
| ISO 178 | Flexural Modulus | MPa | 27.3 |
| ISO 34 | Tear Strength | kN/m | 47 |
| ASTM D3389 | Taber Abrasion | mg/1000 rev | 51 |
| ISO 815 | Compression Set 22 hours @ 23°C | % | 25.68 |
| ISO 815 | Compression Set 22 hours @ 70°C | % | 51.7 |

*ISO: International Standardization Organization

ASTM: American Society for Testing and Materials

DESCRIPTION

TPSiV[®] is a patented thermoplastic vulcanizate (TPV) from Multibase, a subsidiary of The Dow Chemical Company. This unique material offers a combination of properties and benefits from thermoplastics and fully crosslinked silicone rubber. The dispersion of the silicone internal phase is produced by dynamic

“vulcanization” or crosslinking of silicone polymers within the thermoplastic phase and results in a stable droplet type morphology. This technology brings silicone feel and performance, but it is fully processable and recyclable as a thermoplastic. Polyurethane TPSiV combines the benefits of excellent abrasion resistance from the

polyurethane as well as the lower coefficient of friction and improved temperature properties from the silicone rubber. Customized grades in the hardness range of 50 to 80 Shore A are available with special attributes such as high mechanical strength, low compression set, excellent hydrolytic resistance and excellent UV color stability. All *TPSiV*[®] brand products provide a unique silky soft touch feel and bonding to polar substrates such as Polycarbonate and ABS. The *TPSiV*[®] 4100 series provides the best compression set and high temperature performance.

HOW TO USE

Injection Molding Processing Guide

| | |
|-------------------------|-----------|
| Drying Time | 2–4 hrs |
| Drying Temperature | 80–100°C |
| Feed Zone Temperature | 165–175°C |
| Center Zone Temperature | 170–180°C |
| Front Zone Temperature | 180–195°C |
| Nozzle Temperature | 185–200°C |
| Melt Temperature | 195°C |
| Mold Temperature | 20–40°C |
| Injection Speed | Med–Fast |

These process conditions may vary with individual equipment and processes.

HANDLING

PRECAUTIONS

A desiccant dehumidifying dryer is recommended for all drying.

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOWCORNING.COM, OR

FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored at or below 32°C (90°F) in the original unopened containers these products have a usable life of 24 months from the date of production.

PACKAGING INFORMATION

This product is available in a variety of container sizes. Contact your local Dow Corning sales representative for information about container sizes available in your area.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

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