



# OnFlex™ S KE 40A-3S1727

## Thermoplastic Elastomer

### Key Characteristics

#### Product Description

OnFlex™-S KE thermoplastic elastomer compounds are based on hydrogenated styrenic block copolymers. This range of compounds are specially compatibilized to provide excellent adhesion to a variety polar substrates including PC, ABS, PC/ABS, ASA and PVC. OnFlex-S KE compounds can be processed by 2K molding or overmoulding, insert moulding or co-extrusion. In addition to this OnFlex-S KE compounds are formulated to provide good compression set performance, even at elevated temperatures, good processability, a wide hardness range, low temperature flexibility, good scratch resistance, good colourability and surface appearance, and excellent mechanical properties.

#### General

|                       |                                                      |                                            |                     |
|-----------------------|------------------------------------------------------|--------------------------------------------|---------------------|
| Material Status       | • Commercial: Active                                 |                                            |                     |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific             | • Europe<br>• Latin America                | • North America     |
| Features              | • Good Adhesion                                      | • Good Scratch Resistance                  |                     |
| Uses                  | • Automotive Applications<br>• Consumer Applications | • Industrial Applications<br>• Overmolding | • Power/Other Tools |
| RoHS Compliance       | • RoHS Compliant                                     |                                            |                     |
| Forms                 | • Pellets                                            |                                            |                     |
| Processing Method     | • Coextrusion                                        | • Multi Injection Molding                  |                     |

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

| Physical                     | Typical Value (English)                      | Typical Value (SI)                           | Test Method |
|------------------------------|----------------------------------------------|----------------------------------------------|-------------|
| Density                      | 1.06 g/cm <sup>3</sup>                       | 1.06 g/cm <sup>3</sup>                       | ISO 1183    |
| Elastomers                   | Typical Value (English)                      | Typical Value (SI)                           | Test Method |
| Tensile Stress (100% Strain) | 174 psi                                      | 1.20 MPa                                     | ISO 37      |
| Tensile Stress (300% Strain) | 406 psi                                      | 2.80 MPa                                     | ISO 37      |
| Tensile Stress (Break)       | 522 psi                                      | 3.60 MPa                                     | ISO 37      |
| Tensile Elongation (Break)   | 300 %                                        | 300 %                                        | ISO 37      |
| Tear Strength                | 75.9 lbf/in                                  | 13.3 kN/m                                    | ISO 34-1    |
| Compression Set              |                                              |                                              | ISO 815     |
| 73°F (23°C), 72 hr           | 38 %                                         | 38 %                                         |             |
| 158°F (70°C), 22 hr          | 51 %                                         | 51 %                                         |             |
| 212°F (100°C), 22 hr         | 72 %                                         | 72 %                                         |             |
| Hardness                     | Typical Value (English)                      | Typical Value (SI)                           | Test Method |
| Shore Hardness (Shore A)     | 40                                           | 40                                           | ISO 868     |
| Additional Information       | Typical Value (English)                      | Typical Value (SI)                           |             |
| Generic Material Type        | Styrenic<br>Thermoplastic<br>Elastomer (TES) | Styrenic<br>Thermoplastic<br>Elastomer (TES) |             |

Properties are measured using injection molded plaques. Compression Set values are for parts annealed for 24 hours at 100°C.

### Processing Information

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 212 °F                  | 100 °C             |
| Drying Time            | 2.0 hr                  | 2.0 hr             |
| Processing (Melt) Temp | 392 to 446 °F           | 200 to 230 °C      |
| Mold Temperature       | 68 to 104 °F            | 20 to 40 °C        |
| Injection Rate         | Slow-Moderate           | Slow-Moderate      |