

## PolyOne OnFlex™ S KE 50A-3S1731 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

### Material Notes:

OnFlex™-S KE thermoplastic elastomer compounds are based on hydrogenated styrenic block copolymers. This range of compounds are specially compatabilized 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. Properties are measured using injection molded plaques. Compression Set values are for parts annealed for 24 hours at 100°C. Information provided by PolyOne

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_PolyOne-OnFlex-S-KE-50A-3S1731-Thermoplastic-Elastomer-TPE.php](http://www.lookpolymers.com/polymer_PolyOne-OnFlex-S-KE-50A-3S1731-Thermoplastic-Elastomer-TPE.php)

| Physical Properties | Metric    | English       | Comments |
|---------------------|-----------|---------------|----------|
| Density             | 1.07 g/cc | 0.0387 lb/in³ | ISO 1183 |

| Mechanical Properties     | Metric                                   | English                                 | Comments |
|---------------------------|------------------------------------------|-----------------------------------------|----------|
| Hardness, Shore A         | 50                                       | 50                                      | ISO 868  |
| Tensile Strength at Break | 4.30 MPa                                 | 624 psi                                 | ISO 37   |
| Tensile Stress            | 1.70 MPa                                 | 247 psi                                 | ISO 37   |
|                           | @Strain 100 %                            | @Strain 100 %                           |          |
|                           | 3.90 MPa                                 | 566 psi                                 | ISO 37   |
|                           | @Strain 300 %                            | @Strain 300 %                           |          |
| Elongation at Break       | 350 %                                    | 350 %                                   | ISO 37   |
| Compression Set           | 35 %                                     | 35 %                                    | ISO 815  |
|                           | @Temperature 23.0 °C,<br>Time 259000 sec | @Temperature 73.4 °F,<br>Time 72.0 hour |          |
|                           | 48 %                                     | 48 %                                    | ISO 815  |
|                           | @Temperature 70.0 °C,<br>Time 79200 sec  | @Temperature 158 °F,<br>Time 22.0 hour  |          |
|                           | 68 %                                     | 68 %                                    | ISO 815  |
|                           | @Temperature 100 °C,<br>Time 79200 sec   | @Temperature 212 °F,<br>Time 22.0 hour  |          |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
|                    | 650 °C | 1200 °F |          |

|                                             |                                      |                                         |                                                       |
|---------------------------------------------|--------------------------------------|-----------------------------------------|-------------------------------------------------------|
| <b>Glow Wire Test</b><br>Thermal Properties | <b>Metric</b><br>@ Thickness 1.00 mm | <b>English</b><br>@ Thickness 0.0394 in | <b>Flammability Index; IEC 60695-2-12</b><br>Comments |
|---------------------------------------------|--------------------------------------|-----------------------------------------|-------------------------------------------------------|

| Processing Properties | Metric         | English       | Comments |
|-----------------------|----------------|---------------|----------|
| Melt Temperature      | 200 - 230 °C   | 392 - 446 °F  |          |
| Mold Temperature      | 20.0 - 40.0 °C | 68.0 - 104 °F |          |
| Drying Temperature    | 100 °C         | 212 °F        |          |
| Dry Time              | 2.00 hour      | 2.00 hour     |          |

| Descriptive Properties  | Value                                  | Comments |
|-------------------------|----------------------------------------|----------|
| Features                | Good Adhesion                          |          |
|                         | Scratch Resistant                      |          |
| Forms                   | Pellets                                |          |
| Generic Material        | TPE                                    |          |
| Generic Material Type   | Styrenic Thermoplastic Elastomer (TES) |          |
| Generic Name            | Thermoplastic Elastomer (TPE)          |          |
| Injection Rate          | Slow-Moderate                          |          |
| Manufacturer / Supplier | GLS Thermoplastic Elastomers           |          |
| Processing Method       | Coextrusion                            |          |
|                         | Multi Injection Molding                |          |
| Regional Availability   | Africa & Middle East                   |          |
|                         | Asia Pacific                           |          |
|                         | Europe                                 |          |
|                         | North America                          |          |
|                         | South America                          |          |
| RoHS Compliance         | RoHS Compliant                         |          |
| Uses                    | Automotive Applications                |          |
|                         | Consumer Applications                  |          |
|                         | Industrial Applications                |          |
|                         | Overmolding                            |          |

| Descriptive Properties | Value /Other Tools | Comments |
|------------------------|--------------------|----------|
|------------------------|--------------------|----------|

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