



Estane® 58202 TPU

Lubrizol Advanced Materials, Inc. - Thermoplastic Polyurethane Elastomer (Polyether)

Wednesday, November 6, 2019

General Information

Product Description

Type: Estane® 58202 is an 85A Polyether-Type Thermoplastic Polyurethane (TPU).

Features: Halogenated flame retardant compound with good low temperature properties and cut resistance

Uses: Extrusion - wire and cable jacketing and general extrusion where flame retardant properties are required.

General

| | | | |
|-------------------|---|-----------------------------------|--|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Additive | • Flame Retardant | | |
| Features | • Chemical Resistant • Flame Retardant | • Good Toughness • Halogenated | • Low Temperature Resistant • Oil Resistant |
| Uses | • Cable Jacketing | • Wire & Cable Applications | |
| RoHS Compliance | • RoHS Compliant | | |
| Forms | • Pellets | | |
| Processing Method | • Extrusion | • Wire & Cable Extrusion | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|--------|-------------|
| Density / Specific Gravity | 1.25 | | ASTM D792 |
| Mechanical | Nominal Value | Unit | Test Method |
| Taber Abrasion Resistance 1000 Cycles, 1000 g, H-18 Wheel | 155 | mg | ASTM D3389 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress (100% Strain, 0.0300 in) | 798 | psi | ASTM D412 |
| Tensile Stress (300% Strain, 0.0300 in) | 1040 | psi | ASTM D412 |
| Tensile Strength (Break, 0.0300 in) | 4000 | psi | ASTM D412 |
| Tensile Elongation (Break, 0.0300 in) | 650 | % | ASTM D412 |
| Tear Strength ² (0.0300 in) | 358 | lbf/in | ASTM D624 |
| Tear Strength (Split) | 110 | lbf/in | ASTM D470 |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness (Shore A, 5 sec) | 82 to 88 | | ASTM D2240 |
| Thermal | Nominal Value | Unit | Test Method |
| Glass Transition Temperature | -49.0 | °F | DSC |
| Melting Temperature | 311 | °F | DSC |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating | V-0 | | UL 94 |
| Oxygen Index | 32 | % | ASTM D2863 |

Processing Information

| Extrusion | Nominal Value | Unit |
|--------------------|---------------|------|
| Drying Temperature | 219 | °F |

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| Extrusion | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Time | 2.0 to 4.0 | hr |
| Suggested Max Moisture | 0.020 | % |
| Cylinder Zone 1 Temp. | 345 | °F |
| Cylinder Zone 2 Temp. | 354 | °F |
| Cylinder Zone 3 Temp. | 365 | °F |
| Cylinder Zone 4 Temp. | 370 | °F |
| Adapter Temperature | 370 | °F |
| Melt Temperature | 360 | °F |
| Die Temperature | 370 | °F |

Extrusion Notes

Dew Point: -40°C

Screen Pack Recommendation: 20/40

Notes

¹ Typical properties: these are not to be construed as specifications.

² Die C