



## Estane® 58226 TPU

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

Wednesday, November 6, 2019

### General Information

#### Product Description

Type: Estane® 58226 is a 92A aromatic Polyester-Based Thermoplastic Polyurethane (TPU).

Features: Excellent physical properties, good chemical resistance and enhanced hydrolysis resistance. Wide processing window for extrusion.

Uses: Blown and flat die/cast film extrusion, Injection and blow molding.

#### General

|                   |                                    |                                                 |                     |
|-------------------|------------------------------------|-------------------------------------------------|---------------------|
| Material Status   | • Commercial: Active               |                                                 |                     |
| Availability      | • Asia Pacific                     | • Latin America                                 | • North America     |
| Features          | • Aromatic<br>• Chemical Resistant | • Good Processability<br>• Hydrolysis Resistant |                     |
| Uses              | • Blow Molding Applications        | • Blown Film                                    | • Cast Film         |
| RoHS Compliance   | • RoHS Compliant                   |                                                 |                     |
| Forms             | • Pellets                          |                                                 |                     |
| Processing Method | • Blow Molding<br>• Blown Film     | • Cast Film<br>• Extrusion                      | • Injection Molding |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                                     | Nominal Value | Unit   | Test Method |
|--------------------------------------------------------------|---------------|--------|-------------|
| Density / Specific Gravity                                   | 1.21          |        | ASTM D792   |
| Mechanical                                                   | Nominal Value | Unit   | Test Method |
| Taber Abrasion Resistance<br>1000 Cycles, 1000 g, H-18 Wheel | 40.0          | mg     | ASTM D3389  |
| Elastomers                                                   | Nominal Value | Unit   | Test Method |
| Tensile Set (200% Strain)                                    | 21            | %      | ASTM D412   |
| Tensile Stress (100% Strain, 0.0300 in)                      | 1100          | psi    | ASTM D412   |
| Tensile Stress (300% Strain, 0.0300 in)                      | 3000          | psi    | ASTM D412   |
| Tensile Strength (Break, 0.0300 in)                          | 9010          | psi    | ASTM D412   |
| Tensile Elongation (Break, 0.0300 in)                        | 500           | %      | ASTM D412   |
| Tear Strength <sup>2</sup> (0.0300 in)                       | 571           | lbf/in | ASTM D624   |
| Tear Strength (Split)                                        | 150           | lbf/in | ASTM D470   |
| Hardness                                                     | Nominal Value | Unit   | Test Method |
| Durometer Hardness (Shore A, 5 sec)                          | 89 to 95      |        | ASTM D2240  |
| Thermal                                                      | Nominal Value | Unit   | Test Method |
| Glass Transition Temperature                                 | -13.0         | °F     | DSC         |
| Melting Temperature                                          | 284           | °F     | DSC         |
| Aging                                                        | Nominal Value | Unit   | Test Method |
| Change in Volume (24 hr, in Diesel Fuel)                     | 8.0           | %      | ASTM D471   |

### Processing Information

| Extrusion          | Nominal Value | Unit |
|--------------------|---------------|------|
| Drying Temperature | 219           | °F   |
| Drying Time        | 2.0 to 4.0    | hr   |

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| Extrusion              | Nominal Value | Unit |
|------------------------|---------------|------|
| Suggested Max Moisture | 0.020         | %    |
| Cylinder Zone 1 Temp.  | 360           | °F   |
| Cylinder Zone 2 Temp.  | 370           | °F   |
| Cylinder Zone 3 Temp.  | 379           | °F   |
| Cylinder Zone 4 Temp.  | 390           | °F   |
| Adapter Temperature    | 399           | °F   |
| Melt Temperature       | 396           | °F   |
| Die Temperature        | 399           | °F   |

## Extrusion Notes

Dew Point: -40°C

Screen Pack Recommendation: 20/40/80

## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C