

# Estane® 58863 TPU

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

## Message:

Type: Estane® 58863 TPU is an 85A Polyether-Type Thermoplastic Polyurethane.

Features: Good Elasticity - High melt flow for easy processing

Uses: Extrusion - Wire and cable, general extrusion

| General Information |                             |  |  |
|---------------------|-----------------------------|--|--|
| Features            | Workability, good           |  |  |
|                     | High liquidity              |  |  |
| Uses                | Wire and cable applications |  |  |
| RoHS Compliance     | RoHS compliance             |  |  |
| Forms               | Particle                    |  |  |
| Processing Method   | Wire & Cable Extrusion      |  |  |
|                     | Extrusion                   |  |  |

| Physical                                                     | Nominal Value | Unit              | Test Method |
|--------------------------------------------------------------|---------------|-------------------|-------------|
| Specific Gravity                                             | 1.12          | g/cm <sup>3</sup> | ASTM D792   |
| Hardness                                                     | Nominal Value | Unit              | Test Method |
| Durometer Hardness (Shore A, 5 sec)                          | 82 - 88       |                   | ASTM D2240  |
| Mechanical                                                   | Nominal Value | Unit              | Test Method |
| Flexural Modulus (23°C)                                      | 41.0          | MPa               | ASTM D790   |
| Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel) | 4.50          | mg                | ASTM D3389  |
| Elastomers                                                   | Nominal Value | Unit              | Test Method |
| Tensile Stress                                               |               |                   | ASTM D412   |
| 100% strain, 0.762mm                                         | 6.90          | MPa               | ASTM D412   |
| 300% strain, 0.762mm                                         | 11.0          | MPa               | ASTM D412   |
| Tensile Strength (Break, 0.762 mm)                           | 40.7          | MPa               | ASTM D412   |
| Tensile Elongation (Break, 0.762 mm)                         | 600           | %                 | ASTM D412   |
| Tear Strength                                                |               |                   |             |
| 0.762 mm <sup>1</sup>                                        | 66.7          | kN/m              | ASTM D624   |
| Cracking                                                     | 23            | kN/m              | ASTM D470   |
| Compression Set                                              |               |                   | ASTM D395   |
| 23°C, 22 hr                                                  | 20            | %                 | ASTM D395   |
| 70°C, 22 hr                                                  | 66            | %                 | ASTM D395   |
| Thermal                                                      | Nominal Value | Unit              | Test Method |
| Glass Transition Temperature                                 | -50.0         | °C                | DSC         |
| Extrusion                                                    | Nominal Value | Unit              |             |

|                        |           |    |
|------------------------|-----------|----|
| Drying Temperature     | 104       | °C |
| Drying Time            | 2.0 - 4.0 | hr |
| Suggested Max Moisture | 0.020     | %  |
| Cylinder Zone 1 Temp.  | 174       | °C |
| Cylinder Zone 2 Temp.  | 180       | °C |
| Cylinder Zone 3 Temp.  | 188       | °C |
| Cylinder Zone 4 Temp.  | 194       | °C |
| Adapter Temperature    | 194       | °C |
| Melt Temperature       | 192       | °C |
| Die Temperature        | 185 - 191 | °C |

#### Extrusion instructions

Dew Point: -40°C Screen Pack Recommendation: 20/40/80/20

#### NOTE

1. C mould

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