

# ESPOLEX 901

Thermoplastic Polyolefin Elastomer

Sumitomo Chemical America, Inc.

## Message:

ESPOLEX 901 is a polyolefin thermoplastic elastomer (TPO (POE)) product. It can be processed by injection molding and is available in North America, Africa and the Middle East, Latin America, Europe or Asia Pacific. ESPOLEX 901 application areas include engineering/industrial accessories, automotive industry, handles and sporting goods.

| General Information                                                                                                                       |                           |          |             |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------|-------------|
| Uses                                                                                                                                      | Handle                    |          |             |
|                                                                                                                                           | Automotive exterior parts |          |             |
|                                                                                                                                           | Sporting goods            |          |             |
|                                                                                                                                           | Knob                      |          |             |
|                                                                                                                                           |                           |          |             |
| Processing Method                                                                                                                         | Injection molding         |          |             |
| Physical                                                                                                                                  | Nominal Value             | Unit     | Test Method |
| Density                                                                                                                                   | 0.900                     | g/cm³    | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)                                                                                                 | 8.0                       | g/10 min | ISO 1133    |
| Hardness                                                                                                                                  | Nominal Value             | Unit     | Test Method |
| Durometer Hardness (Shore D)                                                                                                              | 41                        |          | ISO 868     |
| Mechanical                                                                                                                                | Nominal Value             | Unit     | Test Method |
| Flexural Modulus                                                                                                                          | 170                       | MPa      | ISO 178     |
| Elastomers                                                                                                                                | Nominal Value             | Unit     | Test Method |
| Tensile Stress <sup>1</sup> (100% Strain)                                                                                                 | 8.10                      | MPa      | ISO 37      |
| Tensile Stress <sup>2</sup> (Break)                                                                                                       | 15.0                      | MPa      | ISO 37      |
| Tensile Elongation <sup>3</sup> (Break)                                                                                                   | 620                       | %        | ISO 37      |
| Impact                                                                                                                                    | Nominal Value             | Unit     | Test Method |
| Charpy Notched Impact Strength <sup>4</sup>                                                                                               |                           |          | ISO 179     |
| -30°C                                                                                                                                     | 5.0                       | kJ/m²    | ISO 179     |
| 23°C                                                                                                                                      | No Break                  |          | ISO 179     |
| Thermal                                                                                                                                   | Nominal Value             | Unit     | Test Method |
| Brittleness Temperature (Type A)                                                                                                          | < -60.0                   | °C       | ISO 812     |
| Injection                                                                                                                                 | Nominal Value             | Unit     |             |
| Processing (Melt) Temp                                                                                                                    | 199 - 243                 | °C       |             |
| Mold Temperature                                                                                                                          | 21.1 - 48.9               | °C       |             |
| Injection Rate                                                                                                                            | Fast                      |          |             |
| Back Pressure                                                                                                                             | 0.345 - 0.689             | MPa      |             |
| Injection instructions                                                                                                                    |                           |          |             |
| Injection Pressure: HighPack/Hold Pressure: 40-70% of Inj PressScrew RPM: SlowPart Draft: 3-6° per sideTool Surface Finish: Light Texture |                           |          |             |
| NOTE                                                                                                                                      |                           |          |             |

|    |                    |
|----|--------------------|
| 1. | Type 1A, 500mm/min |
| 2. | Type 1A, 500mm/min |
| 3. | Type 1A, 500mm/min |
| 4. | Thickness: 3.2 mm  |

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