

# ISOTHANE® 1085AEU-AS

Thermoplastic Polyurethane Elastomer (Polyester)

Great Eastern Resins Industrial Co Ltd (GRECO)

Message:

ISOTHANE 1085AEU-AS product is polyester based thermoplastic polyurethane. It exhibits excellent hydrolytic resistance, UV resistance, easy flow, good antistatic and low temperature performance properties. This product can be injection molded, blow molded, and extruded.

Suggested Applications:

Sheet & film, Cable & wire, Boots, Hoops, Tubes, Hose.

Appearance:

Transparent spherical pellets.

| General Information          |                           |                   |             |
|------------------------------|---------------------------|-------------------|-------------|
| Features                     | Antistatic                |                   |             |
|                              | Good Flow                 |                   |             |
|                              | Good UV Resistance        |                   |             |
|                              | Hydrolytically Stable     |                   |             |
|                              | Low Temperature Resistant |                   |             |
| Uses                         | Film                      |                   |             |
|                              | Footwear                  |                   |             |
|                              | Hose                      |                   |             |
|                              | Sheet                     |                   |             |
|                              | Tubing                    |                   |             |
|                              | Wire & Cable Applications |                   |             |
|                              |                           |                   |             |
|                              |                           |                   |             |
|                              |                           |                   |             |
|                              |                           |                   |             |
| Appearance                   | Clear/Transparent         |                   |             |
| Forms                        | Pellets                   |                   |             |
| Processing Method            | Blow Molding              |                   |             |
|                              | Extrusion                 |                   |             |
|                              | Injection Molding         |                   |             |
| Physical                     | Nominal Value             | Unit              | Test Method |
| Specific Gravity             | 1.18                      | g/cm <sup>3</sup> | ASTM D792   |
| Hardness                     | Nominal Value             | Unit              | Test Method |
| Durometer Hardness (Shore A) | 85                        |                   | ASTM D2240  |
| Elastomers                   | Nominal Value             | Unit              | Test Method |
| Tensile Stress               |                           |                   | ASTM D412   |
| 50% Strain                   | 6.60                      | MPa               |             |
| 100% Strain                  | 8.80                      | MPa               |             |
| 300% Strain                  | 20.0                      | MPa               |             |
| Tensile Strength (Yield)     | 41.0                      | MPa               | ASTM D412   |
| Tensile Elongation (Break)   | 520                       | %                 | ASTM D412   |

|                                  |                  |      |             |
|----------------------------------|------------------|------|-------------|
| Tear Strength <sup>1</sup>       | 140              | kN/m | ASTM D624   |
| Electrical                       | Nominal Value    | Unit | Test Method |
| Surface Resistivity              | 1.0E+8 to 1.0E+9 | ohms | ASTM D257   |
| Extrusion                        | Nominal Value    | Unit |             |
| Drying Temperature               | 100              | °C   |             |
| Drying Time                      | 3.0 to 4.0       | hr   |             |
| Cylinder Zone 1 Temp.            | 170              | °C   |             |
| Cylinder Zone 2 Temp.            | 175              | °C   |             |
| Cylinder Zone 3 Temp.            | 180              | °C   |             |
| Cylinder Zone 4 Temp.            | 175              | °C   |             |
| Die Temperature                  | 170              | °C   |             |
| Extruder Screw L/D Ratio         | 25.0:1.0         |      |             |
| Extruder Screw Compression Ratio | 3.0:1.0          |      |             |
| NOTE                             |                  |      |             |
| 1.                               | Die C            |      |             |

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