

Type: Estane® R190A is a Shore 93A, polyether type thermoplastic polyurethane (TPU). FDA approved (21 CFR 177.2600, 177.1680)

Uses: Injection Molding, Extrusion

| Physical Properties | Standard No. | Units | Value |
|-----------------------------|--------------|----------------------|-------|
| Hardness | ASTM D2240 | Shore A | 93 |
| | | Shore D | 47 |
| Specific Gravity | ASTM D792 | g/cm ³ | 1.11 |
| Mechanical | | | |
| Tensile Stress: | ASTM D412 | kgf/cm ² | |
| At 100% elongation | | | 100 |
| At 300% elongation | | | 170 |
| Tensile Strength | ASTM D412 | kgf/cm ² | 370 |
| Ultimate Elongation | ASTM D412 | % | 680 |
| Tear Resistance (Die C) | ASTM D624 | kgf/cm | 110 |
| Abrasion Loss | ISO 4649 | mm ³ loss | 25 |
| Compression Set | | | |
| At 23°C X22hr | | % | 15 |
| At 70°C X22hr | | % | 45 |
| Mold Shrinkage | ASTM D955 | m/m | 0.007 |
| Thermal | | | |
| Vicat Softening Temperature | ASTM D1525 | °C | 125 |

*Test samples were annealed at 100°C and 24 hours at room temperature before testing.

**These are typical values and should not be used for specifications.

Injection Molding Guide

These settings are to be used only as a guide. This is a typical injection molding temperature profile based on the Test Machine (conditions based on a 75 ton machine with a general purpose screw – L/D 17 – Ø 35mm).

The optimal run conditions for specific equipment will vary depending on the machine and mold design.

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