

Elastollan® 688A10N

Thermoplastic Polyurethane Elastomer (Polyester)

BASF Corp. Thermoplastic Polyurethanes

Message:

Elastollan® 688AN is specifically formulated for extruded profile, sheet and film applications. It exhibits excellent abrasion resistance, toughness, high transparency, low gel, and low yellowness index. It has excellent damping characteristics and outstanding resistance to tear propagation. Elastollan® 688AN conforms to the FDA food contact regulations as described in book 21, section 177.2600 and 177.1680 for both wet and dry food contact applications respectively. Elastollan® 688AN is supplied uncolored in diced or pelletized form.

| General Information | | | |
|--|--------------------------|-------------------|-----------------|
| Features | Food Contact Acceptable | | |
| | Good Abrasion Resistance | | |
| | Good Tear Strength | | |
| | Good Toughness | | |
| | Low Gel | | |
| Agency Ratings | FDA 21 CFR 177.1680 | | |
| | FDA 21 CFR 177.2600 | | |
| Appearance | Clear/Transparent | | |
| Processing Method | Extrusion | | |
| | Injection Molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.21 | g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/8.7 kg) | 5.0 to 20 | g/10 min | ASTM D1238 |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness (Shore A) | 87 | | ASTM D2240 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus (Injection Molded) | 23.4 | MPa | ASTM D412 |
| Flexural Modulus (Injection Molded) | 39.3 | MPa | ASTM D790 |
| Taber Abrasion Resistance | 25.0 | mg | ASTM D1044 |
| Abrasion - DIN | 25 | mm ³ | DIN 53516 |
| Softening Point - DMA | 88 | °C | Internal Method |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress | | | ASTM D412 |
| 100% Strain | 8.96 | MPa | |
| 300% Strain | 24.8 | MPa | |
| Tensile Strength | 40.0 | MPa | ASTM D412 |
| Tensile Elongation (Break) | 520 | % | ASTM D412 |
| Tear Strength ¹ | 124 | kN/m | ASTM D624 |

| Compression Set | | | ASTM D395B |
|------------------------------|---------------|------|-----------------|
| 23°C, 22 hr | 25 | % | |
| 70°C, 22 hr | 45 | % | |
| Thermal | Nominal Value | Unit | Test Method |
| Glass Transition Temperature | -27.0 | °C | Internal Method |
| Vicat Softening Temperature | 80.0 | °C | ASTM D1525 |
| Injection | Nominal Value | Unit | |
| Drying Temperature | 100 to 110 | °C | |
| Drying Time | 2.0 to 3.0 | hr | |
| Suggested Max Moisture | 0.030 | % | |
| Rear Temperature | 190 to 220 | °C | |
| Middle Temperature | 190 to 220 | °C | |
| Front Temperature | 190 to 220 | °C | |
| Nozzle Temperature | 210 to 225 | °C | |
| NOTE | | | |
| 1. | Die C | | |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

