# Elastollan® 1185A10FHF

## Technical Bulletin

## Polyether Type

Elastollan® 1185A10FHF is a polyether-based thermoplastic polyurethane (TPU) containing a non-halogenated fire retardant. It is specifically formulated for wire and cable jacketing, extruded profile, sheet and film applications. It exhibits excellent abrasion resistance, toughness, low temperature properties, hydrolytic stability and fungus resistance. Elastollan® 1185A10FHF is formulated to exhibit the flame retardancy characteristics as described in the table below. As with all TPU products, Elastollan® 1185A10FHF must be dried before processing. The drying step is required to maintain a low moisture content until the product enters the processing equipment. The water content must be less than 0.03% before and during processing. The typical drying conditions should be 2-4 hours @ 175º-195ºF (80º-90ºC). Elastollan® 1185A10FHF can be stored for up to 1 year in its original container. Containers should be stored in a cool and dry area.

| **Properties** | | **Test Method** | **Typical Value** | |
|---|---|---|---|---|
| | | | **English** | **SI** |
| **Physical** | | | | |
| Specific Gravity | gr./cm$^3$ | ASTM D-792 | 1.23 | 1.23 |
| Hardness | Shore A | ASTM D-2240 | 88A | 88A |
| Flame Rating | | UL-94 | V0 - .120",<br>V2 - .060" | V0– 3mm,<br>V2– 1.5mm |
| LOI | % | ASTM D-2863 | 25% | 25% |
| | | | | |
| **Mechanical** | | | | |
| Tensile Strength (Ultimate) | psi / MPa | ASTM D-412 | 5300 psi | 36 MPa |
| Tensile Stress | @100% Elong. | ASTM D-412 | 1550 psi | 11 MPa |
| Tensile Stress | @300% Elong. | ASTM D-412 | 2600 psi | 18 MPa |
| Elongation at Break | % | ASTM D-412 | 500% | 500% |
| Compression Set, % | 22 hrs @ 23ºC | ASTM D-395 (B) | 25% | 25% |
| Compression Set, % | 22 hrs @ 70ºC | ASTM D-395 (B) | 45% | 45% |
| E-Modulus | psi / MPa | ASTM D-412 | 3800 psi | 26 MPa |
| Flexural Modulus | psi / MPa | ASTM D-790 | 7000 psi | 48 MPa |
| Tear Strength | lb./in. N/mm | ASTM D-624, Die C | 550 lb./in. | 96 N/mm |
| Taber Abrasion Resistance / mg loss | 1000 gr./H-18 | ASTM D-1044 | 100 mg | 100 mg |
| DIN Abrasion Resistance | mm$^3$ loss | DIN 53516 | 35 | 35 |
| | | | | |
| **Thermal** | | | | |
| Vicat Softening Point | °F/°C | ASTM D-1525 | 162°F | 72°C |
| Glass Transition Temperature | °F/°C | DSC | -40°F | -40°C |
| | | | | |
| **Processing Conditions, Extrusion** | °F/°C | | 360 - 400°F | 180 - 205°C |
| **Processing Conditions, Inj. Molding** | °F/°C | | 360 - 400°F | - 205°C |

*The above values are shown as typical values and should not be used as specifications.*
*Molded plaques 0.080" thick were cured 20 hours at 100 ºC before testing*

BASF

塑料数据专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168