

Huntsman IROGRAN® A 85 P 4380 TPU-Polyether

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane TPE , Polyurethane, TP , Thermoplastic Polyurethane, Elastomer, Ether Grade

Material Notes:

Introduction: IROGRAN A 85 P 4380 is a flame-retardant, halogen-free, thermoplastic polyether-polyurethane intended for extrusion and injection molding applications. Additional characteristics of the product are excellent microbial resistance, high low-temperature flexibility, especially suitable for cable jackets. Performance Features: Excellent hydrolysis resistance High microbial resistance Low-adhesion surfaces Flame retardant Halogen-free Good melt flow UL 94 classification V2 Applications: Cables Hoses Profiles Cable Bushings Information provided by Huntsman

Order this product through the following link:

http://www.lookpolymers.com/polymer_Huntsman-IROGRAN-A-85-P-4380-TPU-Polyether.php

| Physical Properties | Metric | English | Comments |
|------------------------|---|---|--|
| Density | 1.14 g/cc | 0.0412 lb/in ³ | ASTM D792 |
| Linear Mold Shrinkage | 0.0080 cm/cm | 0.0080 in/in | ASTM D995 |
| Melt Flow | 30 - 60 g/10 min | 30 - 60 g/10 min | Melt Volume Rate (cm ³ /10 min) |
| Melt Index of Compound | 50 g/10 min @Load 21.6 kg, Temperature 190 °C | 50 g/10 min @Load 47.6 lb, Temperature 374 °F | cm ³ /10 min |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|---|--|------------------------------|
| Hardness, Shore A | 87 | 87 | ASTM D2240 |
| Hardness, Shore D | 36 | 36 | ASTM D2240 |
| Tensile Strength at Break | 35.0 MPa | 5080 psi | DIN 53504 |
| Elongation at Break | 610 % | 610 % | ASTM D412 |
| 100% Modulus | 0.00650 GPa | 0.943 ksi | DIN 53504 |
| 300% Modulus | 0.0100 GPa | 1.45 ksi | DIN 53504 |
| Rebound | 42 % | 42 % | Bayshore; ASTM D2632 |
| Tear Strength | 80.6 kN/m | 460 pli | ASTM D624 |
| Abrasion | 35 | 35 | [mm ³]; ISO 4649 |
| Compression Set | 25 % @Temperature 23.0 °C, Time 252000 sec | 25 % @Temperature 73.4 °F, Time 70.0 hour | ASTM D395 |
| | 45 % | 45 % | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|--|--|----------|
| | @ Temperature 70.0 Â°C, Time 86400 sec | @ Temperature 158 Â°F, Time 24.0 hour | |

| Thermal Properties | Metric | English | Comments |
|--------------------|---------------|---------------|----------------|
| Melting Point | 159 - 180 Â°C | 318 - 356 Â°F | Huntsman/TMA |
| Flammability, UL94 | V-2 | V-2 | Non-Halogen FR |

| Processing Properties | Metric | English | Comments |
|--------------------------|-----------------|----------------|-----------|
| Feed Temperature | 25.0 - 40.0 Â°C | 77.0 - 104 Â°F | Extrusion |
| Front Barrel Temperature | 165 - 190 Â°C | 329 - 374 Â°F | Extrusion |
| Nozzle Temperature | 170 - 200 Â°C | 338 - 392 Â°F | Extrusion |
| | 180 - 200 Â°C | 356 - 392 Â°F | Injection |
| Adapter Temperature | 175 - 195 Â°C | 347 - 383 Â°F | Extrusion |
| Die Temperature | 175 - 200 Â°C | 347 - 392 Â°F | Extrusion |
| Melt Temperature | 170 - 195 Â°C | 338 - 383 Â°F | Injection |
| Mold Temperature | 20.0 - 70.0 Â°C | 68.0 - 158 Â°F | Injection |

| Descriptive Properties | Value | Comments |
|------------------------|------------|-----------|
| Heating Zone | 175-195Â°C | Injection |

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