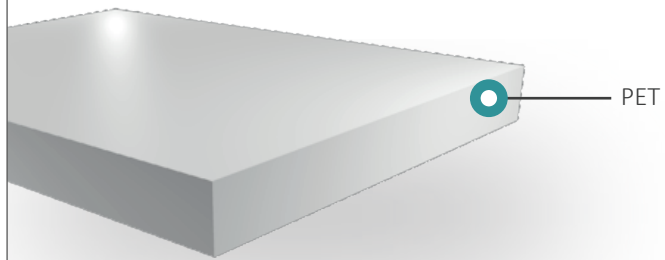


Lumirror® 60.01

Application

- Electrical insulation
 - Siliconizing
 - Mould release
- Printing & coating
 - Security



HAZY PET FILM WITH
HIGH ROUGHNESS

Benefits

- High dimensional stability
- Good flatness
- Excellent machinability due to high roughness
- Certified UL 746 B (105°C)
- UL recognition : CTI II (400V)

Toray Films Europe SAS,
Place d'Arménie,
01700 Saint-Maurice-de-Beynost, FRANCE

To access Toray Films Europe's **certifications list**, please visit
www.torayfilms.eu/en/certifications

Typical Values *(These values do not constitute binding specifications)*

| Properties | Test Method | Unit | 4.5 µm | 6 µm | 8 µm | 12 µm | 15 µm | 18 µm | 19 µm | 23 µm |
|-------------------------|-----------------|---------------------|--------|------|------|-------|-------|-------|-------|-------|
| YIELD | | | | | | | | | | |
| Unit Weight | | g/m ² | 6.3 | 8.4 | 11.2 | 16.8 | 20.6 | 25.2 | 26.6 | 32.2 |
| Area Yield | | m ² /kg | 158.7 | 119 | 89.3 | 59.5 | 48.5 | 39.7 | 37.6 | 31.1 |
| MECHANICAL | | | | | | | | | | |
| Tensile Strength MD | ASTM D 882 | daN/mm ² | 27 | 27 | 20 | 19 | 19 | 20 | 19 | 20 |
| Tensile Strength TD | | | 22 | 25 | 20 | 20 | 22 | 22 | 22 | 23 |
| Elongation at Break MD | | % | 80 | 90 | 100 | 125 | 120 | 110 | 130 | 130 |
| Elongation at Break TD | | | 85 | 95 | 100 | 95 | 85 | 90 | 90 | 95 |
| THERMAL | | | | | | | | | | |
| Shrinkage 150°C 30mn MD | Internal Method | % | 2.4 | 2.3 | 1.7 | 1.4 | 1.4 | 1.7 | 1.2 | 1.5 |
| Shrinkage 150°C 30mn TD | | | 0.6 | 0.7 | 0.6 | 0.2 | 0.3 | 0.1 | 0.2 | 0.1 |
| OPTICAL | | | | | | | | | | |
| Gardner Haze | ASTM D1003 | % | 7.0 | 3.0 | 3.5 | 3.2 | 4.0 | 4.7 | 4.5 | 5.0 |
| SURFACE | | | | | | | | | | |
| Roughness Ra | Internal Method | nm | 100 | 55 | 40 | 30 | 3 | 30 | 30 | 30 |
| Roughness Rz | | | 900 | 500 | 400 | 320 | 330 | 330 | 320 | 350 |
| ELECTRICAL | | | | | | | | | | |
| Break down voltage | JIS C2151 | kV | * | 2.5 | 2.8 | 3.4 | 4.6 | * | 5.1 | 7.9 |
| Volume resistivity | ASTM D257 | Ω | * | * | * | * | * | * | * | * |

| Properties | Test Method | Unit | 29 µm | 30 µm | 36 µm | 50 µm | 75 µm | 100 µm | 125 µm | 190 µm | 250 µm |
|-------------------------|-----------------|---------------------|-------|-------|-------|-------|-------|--------|--------|--------------------|----------------------|
| YIELD | | | | | | | | | | | |
| Unit Weight | | g/m ² | 40.6 | 42.0 | 50.4 | 70.0 | 105.0 | 140.0 | 175.0 | 266.0 | 350.0 |
| Area Yield | | m ² /kg | 24.6 | 23.8 | 19.8 | 14.3 | 9.5 | 7.1 | 5.7 | 3.8 | 2.9 |
| MECHANICAL | | | | | | | | | | | |
| Tensile Strength MD | ASTM D 882 | daN/mm ² | 20 | 20 | 21 | 20 | 20 | 19 | 19 | 17.5 | 16 |
| Tensile Strength TD | | | 23 | 23 | 23 | 24 | 25 | 20 | 20 | 21 | 20 |
| Elongation at Break MD | | % | 130 | 130 | 130 | 130 | 145 | 150 | 150 | 175 | 190 |
| Elongation at Break TD | | | 100 | 100 | 100 | 105 | 100 | 110 | 115 | 130 | 130 |
| THERMAL | | | | | | | | | | | |
| Shrinkage 150°C 30mn MD | Internal Method | % | 1.5 | 1.5 | 1-5 | 1.8 | 1.2 | 1.0 | 1.0 | 1.0 | 0.8 |
| Shrinkage 150°C 30mn TD | | | -0.2 | -0.2 | 0.3 | 0.3 | 0.25 | 0.25 | 0.25 | 0.3 | 0.2 |
| OPTICAL | | | | | | | | | | | |
| Gardner Haze | ASTM D1003 | % | 7.0 | 7.0 | 8.0 | 9.5 | 11.0 | 14.0 | 17.0 | 22.0 | 30.0 |
| SURFACE | | | | | | | | | | | |
| Roughness Ra | Internal Method | nm | 30 | 30 | 30 | 30 | 35 | 35 | 36 | 36 | 36 |
| Roughness Rz | | | 350 | 350 | 350 | 400 | 450 | 550 | 580 | 600 | 730 |
| ELECTRICAL | | | | | | | | | | | |
| Break down voltage | JIS C2151 | kV | 8.3 | 8.3 | 9 | 10.8 | 13.3 | 15.4 | 16.9 | 22.5 | 27 |
| Volume resistivity | ASTM D257 | Ω | * | * | * | * | * | * | * | 3*10 ¹⁸ | 1.6*10 ¹⁸ |

Regulation

Lumirror® 60.01 complies with European applicable requirements for food contact applications. For Toray's certification concerning specific applications with each product, please refer to the 'Declaration of Compliance'.

Presentation of the rolls

Roll packaging: The rolls are suspended on standard paper core with internal diameter of 152.8mm. For all presentation, minimum roll width = 340mm and maximum roll width = 2100mm.

Returnable packaging: Wooden flanges, plastic flanges and pallets are returnable.

Please contact us for...

- Any other presentation (width, length, core)
- Process for returnable packaging
- Any other information about typical values, measuring conditions, tolerances, deliveries...

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