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## Melinex® 238

Melinex® 238 is a flexible, white polyester film with a matt surface.

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### Attributes

According to its UL classification, Melinex® 238 has a relative thermal index of 140 °C, a mechanical RTI of 130 °C and displays excellent ageing resistance compared to common polyester films with a higher oligomer content. Furthermore, Melinex® 238 displays very high dielectric strength, minimum changes to dielectric values, excellent mechanical properties and very good hydrolytic stability. The half life period of the mechanical properties is twice as high.

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### Application

Melinex® 238 was specially developed for use in electric motors with particular chemical exposure as slot insulation, phase insulation and wedges. Due to its low oligomer extraction it is particularly suitable for use in hermetic motors with refrigerants.

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### Standards

- UL approved, file no. E 93687

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### Delivery forms

#### Film thicknesses in µm:

125, 190, 250, 350

#### Melinex® 238 can be supplied:

- in slit rolls from widths of 6 mm (depending on thickness) and above
- in rolls up to widths of 1100 mm

#### Overall diameter of the slit rolls/ rolls

approx. 240, 330 or 450 mm.

### Feathering:

- depth approx. 1 - 12 mm, distance approx. 1 - 10 mm
- from widths of 10 to 240 mm and thickness of 0.125 mm

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### Base

Polyethylenterephthalate

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Updated 10/18

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| Mechanical                       | Unit of measure   |     |     |     |     | Test method           |
|----------------------------------|-------------------|-----|-----|-----|-----|-----------------------|
| Total thickness                  | µm                | 125 | 190 | 250 | 350 |                       |
| Oligomer extraction              | %                 | 0.7 | 0.7 | 0.7 | 0.7 | 24 h in boiling Xylen |
| Tensile strength longitudinal    | N/mm <sup>2</sup> | 200 | 200 | 200 | 190 | ASTM D 882            |
| Tensile strength transversal     | N/mm <sup>2</sup> | 200 | 200 | 200 | 180 | ASTM D 882            |
| Elongation at break longitudinal | %                 | 160 | 160 | 180 | 200 | ASTM D 882            |
| Elongation at break transversal  | %                 | 160 | 160 | 180 | 200 | ASTM D 882            |

| Thermal                | Unit of measure | Conditions      |
|------------------------|-----------------|-----------------|
| Total thickness        | µm              |                 |
| Shrinkage longitudinal | %               | 5 min. at 190°C |
| Shrinkage transversal  | %               | 5 min. at 190°C |

| Thermal         | Unit of measure |     |     |     |     | Test method |
|-----------------|-----------------|-----|-----|-----|-----|-------------|
| Total thickness | µm              | 125 | 190 | 250 | 350 |             |

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| Thermal                | Unit of measure |     |     |     |     | Test method   |
|------------------------|-----------------|-----|-----|-----|-----|---------------|
| Shrinkage longitudinal | %               | 3.6 | 3.0 | 2.5 | 2.5 | ASTM D1204-78 |
| Shrinkage transversal  | %               | 2.8 | 2.5 | 2.0 | 1.5 | ASTM D1204-78 |

| Electrical          | Unit of measure |                  |
|---------------------|-----------------|------------------|
| Total thickness     | µm              | 125              |
| Volume resistivity  | Ω x m           | 10 <sup>14</sup> |
| Dielectric strength | kV              | 16               |

| Electrical          | Unit of measure |                  |                  |                  | Test method                               |
|---------------------|-----------------|------------------|------------------|------------------|---|
| Total thickness     | µm              | 190              | 250              | 350              |   |
| Volume resistivity  | Ω x m           | 10 <sup>14</sup> | 10 <sup>14</sup> | 10 <sup>14</sup> | ASTM D257-83 (100V DC at 25 °C and 1000s) |
| Dielectric strength | kV              | 20               | 25               | 26               |   |

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