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# Electrical insulating material

## ArpaxX® N 18010 FI 15610

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**Characteristics:**

ArpaxX® N 18010 FI 15610 is an insulation material of insulation class H (180°C). Temperatures up to 200°C only have a small effect on its electrical properties. The good mechanical properties can be extrapolated from higher temperatures.

Due to the polymer structure ArpaxX® N 18010 FI 15610 can also be used at low temperatures down to -190°C. It has high short-time field intensity. The permanent field intensity, however should not be above 1.5 kV/mm. ArpaxX® N 18010 FI 15610 is compatible with all classes of conventional resins, coatings, adhesives and transformer fluids, lubricating oils and coolants. Common solvents can lead to light reversible expansion. ArpaxX® N 18010 FI 15610 is flame-retardant (UL94V-0), it also has a very high level of beta and gamma ray resistance.

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**Application:**

ArpaxX® N 18010 FI 15610 is used in almost all known electrical sheet insulation applications. The application ranges from AC and DC motors up to large generators, wet and dry transformers and chokes, also under beta and gamma radiation.

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**Roll width:** 1000 mm.

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**Length:** upon customer request

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| Properties | Unit | Value | | | | | |
|---|---|---|---|---|---|---|---|
| Thickness | mm | 0,04 | 0,05 | 0,08 | 0,13 | 0,18 | 0,25 |
| Density | g/cm³ | 0,64 | 0,85 | 0,95 | 1,00 | 1,00 | 1,00 |
| Dielectric strength | kV/mm | 18 | 20 | 30 | 35 | 36 | 37 |
| Shrinkage at 300°C | % | 0 | 0 | 0 | 0 | 0 | 0 |
| Thermal conductivity | W/mK | 0,29 | 0,29 | 0,29 | 0,25 | 0,25 | 0,25 |
| Dielectric constant at 60 Hz | | 2,0 | 2,0 | 2,0 | 2,9 | 3,1 | 3,1 |
| Dissipation factor 60 Hz ($x10_{-3}$) | | 4 | 5 | 6 | 6 | 6 | 7 |
| Tensile strength<br>MD<br>XD | N/cm | - | <br>20<br>10 | <br>61<br>32,6 | <br>110,5<br>66,7 | - | <br>241<br>146,7 |

| Properties | Unit | Value | | | | | |
|---|---|---|---|---|---|---|---|
| Thickness | mm | 0,30 | 0,38 | 0,51 | 0,61 | 0,76 | 0,85 |
| Density | g/cm³ | 1,05 | 1,10 | 1,15 | 1,20 | 1,20 | 1,20 |
| Dielectric strength | kV/mm | 37 | 38 | 38 | 34 | 34 | 34 |
| Shrinkage at 300°C | % | 0 | 0 | 0 | 0 | 0 | 0 |
| Thermal conductivity | W/mK | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 | 0,25 |
| Dielectric constant at 60 Hz | | 3,4 | 3,6 | 3,8 | 3,8 | 3,8 | 3,8 |
| Dissipation factor 60 Hz ($x10_{-3}$) | | 7 | 7 | 7 | 7 | 7 | 7 |
| Tensile strength<br>MD<br>XD | N/cm | | <br>48<br>148 | | | | |

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**Trademark information:** ArpaxX® ist eine eingetragene Marke der Firma der Dr. D. Müller GmbH, Deutschland.

**Please note:** The information in this data sheet is based on our current knowledge and experience. They do not disengage the fabricator and user from own tests and inspections because of the plenty of possible effects. There is no judicial binding assurance of certain properties or of the qualification for a concrete application in our declaration. We recommend consulting us in individual cases. The acceptor of our products has to observe possible industrial property rights as well as present laws by himself.