

## Electrical Insulation Materials

### Flexiso® NPIN FI 15050

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**Structure:** Flexiso® NPIN FI 15050 is a flexible three-layer material consisting of a polyimide film which is laminated on both sides with calendered aramid paper. Flexiso® NPIN FI 15050 is used in applications up to 180 °C.

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**Characteristics:** Flexiso® NPIN FI 15050 is an insulation material with excellent long-term thermal performance combined with very good mechanical properties such as tensile strength and high edge tear resistance and high electrical breakdown strength. In addition, Flexiso® NPIN FI 15050 has a smooth surface and therefore can also be processed into fully automated production lines.

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**Application:** Flexiso® NPIN FI 15050 is primarily used as slot insulation in electrical engineering and as slot insulation and slot closure for motors with high thermal requirements. Furthermore Flexiso® NPIN FI 15050 is used in various fields of electrical engineering.

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**Delivery Forms:** Flexiso® NPIN FI 15050 is supplied in rolls (width max. 900 mm) and as reels (from 6 mm wide). Other formats, for example, blanks, die-cut and formed parts are supplied to customer specifications, also self-adhesive forms are available on request. Flexiso® NPIN FI 15050 is produced in Chamois as standard.

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## Flexiso® NPIN FI 15050

**Storage Conditions:** Flexiso® NPIN FI 15050 has an unlimited shelf life under normal conditions (20° C, 50% r. F.). The material should be protected against moisture, dryness and direct sun and UV radiation exposure as well as any protected heat effects.

Properties	Test method	Unit	Value		
Total thickness	IEC-626-2	mm	0.20	0.30	0.40
		%	± 15%	± 15%	± 15%
Film thickness	IEC-626-2	µm	25	25	25
Nomex thickness	IEC-626-2	µm	80	130	180
Basis weight	IEC-626-2	g/m <sup>2</sup>	195	300	410
			± 12%	± 12%	± 12%
Tensile strength					
MD	IEC-626-2	N/mm <sup>2</sup>	≥160	≥250	≥270
CD	IEC-626-2	N/mm <sup>2</sup>	≥100	≥150	≥170
Elongation					
MD	IEC-626-2	N/10mm	≥10	≥10	≥10
CD	IEC-626-2	N/10mm	≥ 8	≥ 8	≥ 8
Humidity content	IEC-626-2	%	5.7	6.2	6.4
Breakdown voltage	IEC-626-2	kV	≥8	≥9	≥10

**Trademark information:** Flexiso® is a registered trademark of Dr. Dietrich Müller GmbH, Germany.  
 Nomex® is a registered trademark of the company DuPont.

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