

Non-Woven Polyester

Component separation and easy stripping for power and special cables

Descripción

Non-woven polyester (NWP) is a technical tape made from short, micrometric-diameter fibres using carding technology. Unlike compact polyester film, its fibrous structure offers a controlled-microporosity surface that eases cable stripping and prevents unwanted adhesion between layers during extrusion processes.

In cable construction, NWP works as a separator between insulation and screen, or between screen and outer sheath. Its porous texture lets the sheath compound grip the surface lightly during extrusion without bonding permanently, resulting in a clean, controlled strip during field installation operations.

We offer thicknesses from 40 to 200 µm with short-term thermal stability of 230°C and continuous service of 90°C per IEC 216. This range allows the separator thickness to match each construction's tolerances, from instrumentation cables to large-section power cables.

Propiedad	Method	NWP-04	NWP-05	NWP-06	NWP-09	NWP-12	NWP-16	NWP-20
Thickness (µm)	ISO 9073-2	40	50	60	90	120	160	200
Grammage (g/m ²)	ISO 9073-1	20±2	25±3	30±3	40±3	50±3	60±4	70±5
Tensile strength (N/cm, min.)	ISO 9073-3	≥20	≥25	≥28	≥38	≥43	≥40	≥55
Elongation at break (% , min.)	ISO 9073-3	≥10	≥10	≥12	≥12	≥12	≥12	≥12

Thermal and environmental properties (common to all references)

Propiedad	Value	Test method
Short-term thermal stability	230°C	Q/TR.J02.031-2000
Long-term thermal stability	90°C	IEC 216
Moisture content	≤5%	ISO 287

Guía de selección

The right reference depends on the balance between required separation thickness, available space and mechanical strength during manufacturing. Grammage is a direct indicator of fibre density and, therefore, of effective separation capacity.

Reference	Thickness	Grammage	Tensile strength	Typical application	When to choose
NWP-04	40 µm	20±2 g/m ²	≥20 N/cm	Fine separation in instrumentation cables	Tight spaces, compact constructions
NWP-05	50 µm	25±3 g/m ²	≥25 N/cm	Standard separation	Thickness/cost balance

Reference	Thickness	Grammage	Tensile strength	Typical application	When to choose
NWP-06	60 µm	30±3 g/m ²	≥28 N/cm	Control and signal cables	General use, good handling
NWP-09	90 µm	40±3 g/m ²	≥38 N/cm	LV power cables	Greater separation thickness
NWP-12	120 µm	50±3 g/m ²	≥43 N/cm	MV power cables	Maximum tensile strength
NWP-16	160 µm	60±4 g/m ²	≥40 N/cm	Special cables, robotics	Moderate cushioning effect
NWP-20	200 µm	70±5 g/m ²	≥55 N/cm	Maximum separation	Large-section cables, demanding conditions

Variantes disponibles

Colour

- Natural white — standard

Alternative materials by application

- Compact polyester film (PET) — when dielectric strength is required
- Non-woven polyester with water-blocking — for longitudinal water blocking
- Expanded polypropylene (PPF) — when a pronounced cushioning effect is required

Formatos de entrega

The supply format directly influences process continuity and taping efficiency. Material can be supplied in different formats and dimensions adapted to each machine type and production speed.

Pad / Roll (pancake)

Core ID: 76 mm (3"), 102 mm (4"), 152 mm (6")
 Max OD: 80 - 600 mm
 Width range: 5 - 1000 mm
 Core material: Plastic or cardboard

Spool (TWS / STS reel)

Core ID: 76 mm (3")
 Max OD: 300 - 320 mm
 Width range: 3.5 - 80 mm
 Winding type: Traverse Wounded (TWS) or Step to Step (STS)
 Core material: Plastic or cardboard

The values shown below come from tests run to ISO standards and characterise the material's behaviour both during processing and in service.

Los valores indicados son típicos y no constituyen especificaciones vinculantes.