
Compound NT-004

Compound NT-004 is a red colored radiation crosslinkable non-tracking compound for heat-shrinkable tubing for indoor and outdoor applications up to 36 kV, to permit clearance reduction, flashover protection against accidental bridging and prevention of pollution flashover. The compound shows excellent weathering and non-tracking properties.

Compound properties

Compound characteristics:

<u>Properties</u>	<u>Test Method</u>	<u>Typical Value</u>
Specific gravity	ASTM D 792	1,20 (gr/cm ³)
MFI (190°C/5kg)	ASTM D 1238	2 – 4 cm ³ /10 min
Tensile Strength	DIN 53504 (S1) 200mm/min	10,0 N/mm ²
Elongation @ break	DIN 53504 (S1) 200mm/min	500 %

Processing

Extrusion

Recommended extrusion temperature profile	:	140°C-145°C-145°C-150°C-155°C
Recommended draw-down ratio	:	< 1.1 : 1
Recommended drying time (Dry Air)	:	4 hr@50°C

Crosslinking

Recommended radiation dose	:	40 kGy (*)
Hot-set elongation (@ 150°C and 20N/cm ² load)	:	250-350 %

Packaging:

It is recommended to package the compound in sealed ALU bags of 25 kg.

We recommend to store the compound below 30°C. Shelf Life : minimum 6 months

(*): This radiation dose is a starting point only. The dose shall be adapted to achieve other hot-set-elongation values if needed.

It is recommended to process this compound on an extruder which processes polyolefin compounds only. Should this compound be processed on an extruder, which is also used for processing other compounds, the screw, extruder head, tooling and other devices should be cleaned very well. Any dirt, irregularities and contaminations, due to bad cleaning could result in pinholes or 'blow-outs' during the expansion process or result in mal-functioning of the final non-tracking tubing.

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Typical tubing properties after crosslinking

Heat-shrinkable tubing made of this compound will show superior non-tracking characteristics combined with excellent erosion and UV-resistance, resulting in an exceptional long-term performance, confirming the material reliability. The flexibility of the tubing, manufactured with this compound makes it an excellent choice for bent shapes, allowing the tubing to be easily positioned. The low shrink temperature will result in a quick and easy installation.

Property	Test Method	Typical value
<u>Physical</u>		
Tensile strength at break	ASTM D 638	10 N/mm ²
Elongation at break	ASTM D 638	300 %
Density	ASTM D 792	1,20 gr/cm ³
Water Absorption	ISO 62	0,1%
<u>Thermal</u>		
Continuous operating temperature	Internal Method	-40 °C to +105 °C
<u>Electrical</u>		
Dielectric strength	ASTM D 149	20 kV/mm ²
Volume resistivity	ASTM D 257	1 x 10 ¹⁵ Ωcm
Comparative Track Index (CTI) (100 drops 575V; 50 drops 600 V)	IEC 60112	Passed
Permittivity (εr)	ASTM D150	3
Fungus Resistance	ASTM G21/ASTM D 638	No Growth

(*): Typical values can only be achieved if compound is processed according to our recommendations

Smaron datasheet NT-004-RED

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