

## Compound SGT36T-004-358

*Compound SGT36T-004358 is a black radiation crosslinkable stress grading compound for heat-shrinkable tubing for long-term stress control applications for terminations and joints up to 36 kV requiring a dielectric constant of over 45*

### Compound properties

Compound SGT36T-004-358 is a radiation crosslinkable compound offering excellent stress control properties and is intended to be used on cable terminations. Due to the high dielectric constant, this compound is also suitable for tubing in cable joints.

The carefully selected combination of polymers, fillers, processing aids and additives has resulted in a compound which combines high electrical performance and optimal physical properties.

The compound is easy processable on low compression screws.

### Compound characteristics

<u>Property</u>	<u>Test Method</u>	<u>Typical Value</u>
Specific gravity	ASTM D 792	1,20 gr/cm <sup>3</sup>
MFI (190°C/10.0kg)	ASTM D 1238	1,5 - 3,5 cm <sup>3</sup> /10min
Tensile Strength	DIN 53504 (S1) 200mm/min	10.0 N/mm <sup>2</sup>
Elongation @ break	DIN 53504 (S1) 200mm/min	400 %

#### Processing

##### Extrusion

Recommended extrusion temperature profile:		160°C-170°C-180°C-180°C-185°C
Recommended extrusion screw :		Low compression
Recommend extruder (L/D) :		25
Recommended draw-down ratio :		< 1,1 : 1
Recommended drying time ( dry Air ) :		4 hr@50°C

##### Crosslinking

Recommended radiation dose :		5 - 10 kGy (*)
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(\*): To be optimized by the user

#### Packaging:

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

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

*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 stress control tubing.*

#### **Smaron bv**

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### Tubing properties after Crosslinking

Heat-shrinkable tubing produced on basis of this compound will show superior stress control characteristics due to the carefully controlled volume resistivity and permittivity. The resulting impedance characteristic controls electrical stress at the end of the insulation screen, suppressing discharges and preventing damage to the cable in service. Easy and quick installation.

<u>Property</u>	<u>Test Method</u>	<u>Typical value (*)</u>
<u>Physical</u>		
Tensile strength at break	ASTM D 638	10 N/mm <sup>2</sup>
Elongation at break	ASTM D 638	300 %
Density	ASTM D 792	1,20 g/cm <sup>3</sup>
Water Absorption	ISO 62	0.2 %
Hardness	ASTM D 2240	35 Shore D
<u>Thermal</u>		
Continuous operating temperature	Internal Method	-55°C to +105°C
<u>Electrical</u>		
Volume resistivity	ASTM D 257	≥1 x 10 <sup>9</sup> Ωcm
Dielectric Constant ( Permittivity )	ASTM D150	@ 50 Hz > 45
Dissipation Factor	ASTM D150	@ 50 Hz < 0,8

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

**Smaron datasheet SG36T-004-358-BLK**

**Revision date: 04-05-2023**

*Notice : The information given in this datasheet is believed to be accurate and reliable. However, no warranty, express or implied, or guarantee is given as to the suitability, accuracy, reliability or completeness of the information. This information does not hold us liable for damages or penalties resulting from following our suggestions or recommendations.*

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