

EGYLINK GF1510/CT7000

UV stabilized silane crosslinkable Polyethylene compound for Aerial cables with diameter cables $\geq 70 \text{ mm}^2$

Description

EGYLINK GF1510 is a fast curing silane crosslinkable polyethylene compound curable by moisture and possessing excellent extrusion properties at high output rates, the graft compound GF 1510 is mixed with crosslinking catalyst masterbatch CT7000 generally in the ratio 91:9, the combination have excellent thermo-oxidative stability and contain 2.5% carbon black and has been specially developed for insulation overhead or aerial cables of the bunched type with diameter starting from 100 mm².

Specifications

EGYLINK GF1510/CT7000 in combination meets the applicable requirements below when processed using sound extrusion and testing procedures

IEC60502-1, BS 7655, HD 603

The standards refer to above is a selection and not complete coverage of all applicable standards, contact Egyplast representative for additional information.

Property	Test Method	Unite	Typical Value
Physical and mechanical Properties			
Density	ASTM D 792	g/cm ³	0.925
Melt flow index (2.16 kg at 190°C)	ASTM D 1238	g/10 min	1.0
Tensile strength	BS EN 60811	N/mm ²	16
Elongation at break	BS EN 60811	%	400
Ageing behavior after 7 days at 135°C			
Tensile strength	BS EN 60811	% Variation	≤ 20
Elongation at break	BS EN 60811	% Variation	≤ 20
Thermo mechanical Properties			
Cold bend at -70°C	IEC EN 60811	-	Pass
Curing by hot set test (Forced cure in water at 90°C)			
15 minute ,200°C,0.2 MPa			
Elongation under Load	IEC EN 60811	%	60
Permanent Elongation after cooling	IEC EN 60811	%	5
Electrical Properties			
Volume resistivity at 20°C	BS 6622	Ω.cm	10 ¹⁶
Dielectric strength at 20°C	IEC 60243	Kv/mm	21

Dielectric Constant	IEC 60250	2.26
Dissipation Factor	IEC 60250	2.88X10 ⁻⁴

Processing Techniques

EGYLINK GF1510/CT7000 are suitable for most equipment for PVC/PE extrusion

Extrusion

Best final characteristics of cables obtained can be reached by pre-drying CT7000 in the proper way for a few hours at 60-70°C. This permits to greatly reduce pre-cross-linking risks and thus a longer work time without halts in the process, the following characteristics are recommended

L/D Ratio >18 & Compression ratio 1.8 – 2.5: 1 & Extrusion moulds chromium plated

As a guide the following temperature profile is recommended (this profile will vary slightly depend on extruder type, head design and output)

Barrel	Flange	Head	Die	Screw
140-180 °C	200 °C	210 °C	215 °C	70-80 °C

Note:

- A direct flame must be applied to the die face to minimise die drool, and to improve surface finishing.
- If flame is not used the die temperature has to be maintained at 300 °C or more.

Crosslinking

This product can be crosslinked in room temperature, by immersion in hot water or exposure to low pressure steam at 90-95°C , the crosslinking time period may be varied due to humidity , thickness of insulation , reel size and temperature

Storage & shelf life

EGYLINK GF1510 Has shelf life time of at least 6 months from manufacturing date, the storage in cool dry conditions will maximise the shelf life, other precautions are

- Packing should remain sealed
- Avoid temperature more than 25°C
- Avoid storage outside and in direct sun light
- Use within 4 hours of opening packing

Packing

- Moisture resistant sacks containing 25 kg
- Boxes with a moisture resistant heat sealed liner containing approximately 550 kg

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