

Tree Retardant Cable Insulation

Density 0.922

Description

CLNA TR-8142EC is a water tree retardant, crosslinkable, low density polyethylene compound designed for medium voltage power cable insulation. Its permanent tree-retardant additive provides improved performance in medium voltage power cable in service involving exposure to water. It has an extremely low level of contamination and proper balance of non-staining antioxidant and peroxide to ensure thermal stability and optimum cure levels

Applications

CLNA TR-8142EC can be used for the insulation of medium voltage power cables, i.e. up to 72 kV or for corresponding stresses.

Specifications

CLNA TR-8142EC meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

ANSI/ICEA S-94-649, S-66-524
 AEIC CS5 /AEIC CS8
 IEC 60502, 60840

CENELEC HD 620 S1, 632 S1
 BS 6622
 DIN VDE0207, 2XI1

Physical Properties	Unit	Test Method	Typical Value
Density	g/cm ³	ASTM D1505	0.922
Tensile Strength	kg/cm ²	ASTM D638	200
Elongation	%	ASTM D638	550
Oven Aging @ 135°C, 7 days			
Retention of Tensile Strength	%	ASTM D638	>90
Retention of Elongation	%	ASTM D638	>90
Hot/Set @ 200°C, 20N/cm ²		IEC 60811-2-1	
Hot Elongation	%		<100
Permanent Set	%		<5
Cure Behavior @ 180°C (MDR)		HCY-I-24196	
Ts1	minute		>1
Mh-MI	lb·in		>4.5
Moisture	ppm	HCY-I-24205	<200

Electrical Properties	Unit	Test Method	Typical Value
Dielectric Constant @ 1 MHz	-	ASTM D150	<2.3
Dissipation Factor @ 1 MHz	-	ASTM D150	<0.0005
Dielectric Strength (E ₀)	kV/mm	ASTM D149	>20
DC Volume Resistivity	ohm cm	ASTM D257	>10 ¹⁶

Tree Resistance	Unit	Test Method	Typical Value
Water Tree Size	um	ASTM D6097	<300
Resistance to Water Tree Growth @25°C, 30days	%	ASTM D6097	<15

1) These are typical properties and are not to be regarded as specifications.

2) Compression molded sample cured at 175 °C for 15 min.

Cleanliness

Cleanliness levels are ensured through Hanwha Chemical cleanliness inspection system.

Processing Guidelines

CLNA TR-8142EC provides excellent surface finish and higher output rates over a broad range of conditions. A range of extrusion temperature in processing condition is 115~130 °C. Optimum results are normally achieved at a melt resin temperature of approximately 130 °C.

Storage

The material should be stored indoors (15~25 °C) in closed original packages in clean and dry environment. It is recommended that the using of the product on a first-in, first-out basis be established. Then recommended storage time at customer should not exceed 1 year.

Quality Systems

Hanwha maintains a quality management system according to ISO 9001. This system provides traceability of individual batches and their production. If process is changed in a way that suspected to change the properties of the product, Hanwha will provide adequate information to the customer.



Certificate

Based on quality inspection data at production, Hanwha supplies an inspection certificate for each batch. The certificate contains:

Product name
Batch number
Production date
Number of contaminants
Methanol wash
etc.

Data Sheet and Safety

Most data sheet and safety data sheets are available on Hanwha web site, <http://hcc.hanwha.co.kr>
Please contact your Hanwha representative for more details on various aspects of safety, recovery and disposal of the product.

