

Published Jan. 2020

Hanwha

Wire & Cable Compound

CLNA TR-8142EC

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



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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.



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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.



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