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POLYESTER C200 G2 ROUND + DAGLAS® MIXED YARN

High Temperature Enamel & Textile Insulated Copper Wire

DESCRIPTION

POLYESTER C200 G2 consists of a round copper conductor with a dual coat enamel of polyesterimide or THEIC modified polyester base coat with a polyamide-imide overcoat according to IEC 60317-13.
POLYESTER C200 G2 enamelled wire is then insulated with a single or double covering of DAGLAS® mixed glass and polyester fibres.
During the production process, the DAGLAS® fibres are fused to the enamel through heat treatment.
Although this processes is sufficient to prevent the yarns from fraying from the conductor after cutting, further varnish impregnation is also possible in epoxy (V155), polyesterimide (V180) and silicone (V200) resin systems.
B-stage thermally adhesive varnishes can also be used for thermal classes 155 and 180°C. (V155K & V180K).

APPLICATIONS

POLYESTER C200 G2 + DAGLAS® wires provide high mechanical and bond strength, along with good resistance to abrasion and solvents.
POLYESTER C200 G2 + DAGLAS® wires find use in rotating machines up to 6kV, as well as windings which are subject to constantly high thermal and mechanical stress, such as magnet coils.

BUILD CRITERIA

	Daglas® Insulation Increase Over Polyester C200 Grade 2 Enamelled Wire*	
Nominal Bare Wire Diameter	**Single Covering**	**Double Covering**
0.80mm - 2.40mm	0.20mm - 0.23mm	0.28mm - 0.32mm
2.40mm - 3.50mm	0.21mm - 0.24mm	0.33mm - 0.36mm
3.50mm - 6.00mm	0.23mm - 0.26mm	0.33mm - 0.36mm

* Insulation increase and tolerances of Polyester C200 Grade 2 Enamelled wires according to IEC 60317-0-1.

PROPERTIES

POLYESTER C200 GRADE 2 ENAMELLED WIRE	
Temperature class, IEC 600851-6	200°C
Enamel - Base coat	Polyesterimide or Polyester (THEIC)
Enamel - Top coat	Polyamide-imide
Size range able to be covered with Daglas®	0.800 - 6.000mm
Grades	Grade 2
POLYESTER C200 GRADE 2 + DAGLAS®	
THERMAL PROPERTIES	
Thermal index, NEMA MW 1000	
Polyester C200 G2 + 1 or 2 Daglas®	155°C
Polyester C200 G2 + 1 or 2 Daglas® + V155/V155K	155°C
Polyester C200 G2 + 1 or 2 Daglas® + V180/V180K	180°C
Polyester C200 G2 + 1 or 2 Daglas® + V200	200°C
Heat shock, 30 mins @ 180°C 10 x d, IEC 60851-6 Test 9	
Polyester C200 G2 + 1 or 2 Daglas®	No cracks
Polyester C200 G2 + 1 or 2 Daglas® + V155/V155K	No cracks
Heat shock, 30 mins @ 200°C 10 x d, IEC 60851-6 Test 9	
Polyester C200 G2 + 1 or 2 Daglas® + V180/V180K	No cracks
Polyester C200 G2 + 1 or 2 Daglas® + V200	No cracks

POLYESTER C200 G2 ROUND + DAGLAS® MIXED YARN

MECHANICAL PROPERTIES (ALL TYPES)	
Springiness, IEC 60851-3 Test 7	≤ 5.5
Flexibility - Mandrel winding 8 x d, IEC 60851-3 Test 8	No cracks
Adhesion after 20% elongation, IEC 60851-3 Test 8	No loss of adhesion
Shear strength, V155K & V180K, FIM test no. 1.47.14	≥ 3 N/mm^2
ELECTRICAL PROPERTIES	
Breakdown voltage after bending, IEC 60851-5 Test 13	
Polyester C200 G2 + 1 Daglas®	≥ 2,750V
Polyester C200 G2 + 2 Daglas®	≥ 3,000V
STANDARDS	
Polyester C200 G2 Enamelled Wire	IEC 60317-13 NEMA/ANSI type MW 35C UL Approved, Class 200
Dimensions & Tolerances	IEC 60317-0-1
Methods of test	IEC 60851
Packaging	IEC 60264
SHELF-LIFE	
Polyester C200 G2 + 1 or 2 Daglas®	Indefinite
Polyester C200 G2 + 1 or 2 Daglas® + V155	Indefinite
Polyester C200 G2 + 1 or 2 Daglas® + V180	Indefinite
Polyester C200 G2 + 1 or 2 Daglas® + V200	Indefinite
Polyester C200 G2 + 1 or 2 Daglas® + V155K	12 months @ 25°C & 60% relative humidity
Polyester C200 G2 + 1 or 2 Daglas® + V180K	12 months @ 25°C & 60% relative humidity
LEGISLATION	
RoHS compliant	Yes
REACH SVHC concentration	0%