



INSULATION SKETCH

INSULATION SYSTEMS ENGINEERING

Flexible Support Ring (Glass Roving Cord) for Bracing of
AC High Voltage Stator With VPI Insulation System

IN.SK. 46058
Rev. No.: 00
Rev. Dt.: 04/03/2011
Sht. 1 of 4 shts.

INSULATION CLASS - F

1.0 GENERAL

This specification governs the quality requirements of flexible support ring (Glass Roving Cord) suitable for end winding bracing of high voltage stator coils with VPI insulation system.

The cord consists of continuous E-type glass rovings which are impregnated with suitable accelerator and taped with a heat shrinkable sealing tape.

Glass fibre rovings shall be silane treated made from low alkali 'E' glass intended for use with epoxide resins. The glass roving shall be free from oil and grease spots, stains and other contaminations.

The accelerator used shall be compatible with Bisphenol-A and diglycidyl ether based epoxy resin and acid anhydride hardener based VPI impregnation system.

The flexible support ring shall undergo VPI process (as part of stator winding) with the above mentioned solventless epoxy resin & hardener mix and shall have a temperature index of ≥ 155 deg. C.

After VPI process and curing, the ring will be a homogenous void free structure of high mechanical strength.

2.0 APPLICATION

Used as end winding support ring for AC high voltage stator coils with VPI insulation system.

3.0 COMPLIANCE WITH NATIONAL STANDARDS

There is no Indian standard covering this type of material.

4.0 DIMENSIONS AND TOLERANCES

4.1 Sizes

Standard size: 10mm Diameter.

Distribution:	Date of Rev.00: 01/03/2011	Name	Signature
IMM-Winding	1	Prepared by Bishwanath Oraon	
LEM-Winding	1	Checked by Anirudha Tijare	
AME	2	Approved by K.N. Das	
MM-EM (MEX)	2		
GTG (EM)	1		
QC (LEM/ IMM)	1/1	Issued by Nidhi Gupta	

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED



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4.2 Tolerance on Size

Tolerance on diameter: ± 2 mm

The size and length of material shall be as stated on the order.

4.3 Length

Length of rope: 600 meters.

However, for special applications, any other length may be ordered. A suitable drum shall be used for supplying the material.

5.0 SHELF LIFE AND STORAGE

≤ 25 Deg.C: 12 months, minimum from the date of delivery.

6.0 TEST METHOD

Unless otherwise specified, all the tests shall be conducted as per conventional methods.

7.0 SAMPLE FOR TESTS

2 meters length of cord shall be sent to TSD for testing from every consignment.

8.0 CONSTITUENTS

8.1 Fibre Glass Rovings to BP25693

Glass fibre rovings shall be preferably silane treated made from low alkali 'E' glass intended for use with epoxy resins.

8.2 Accelerator for Treatment

The accelerator shall be compatible with Bisphenol-A based epoxy resin and Anhydride hardener system.

8.3 Heat Shrinkable Sealing Tape to BP25795

Polyester-glass fabric tape having a backing of polyester terephthalic acid ester film and mixture of levapren and Mowital/epoxy resin (cured and flexible) as binder is used as diffusion barrier covering tape.

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