



PRODUCT STANDARD

SWITCHGEAR ENGINEERING DIVISION

SG15213
REV00

Page 1 of 1

QUALITY ASSURANCE PLAN FOR SEAL OFF BUSHING FOR MEDIUM VOLTAGE SWITCHGEAR

Sl.No	MATERIAL / ASSEMBLY	CHARACTERISTICS	CLASS / CATEG	TYPE OF CHECK	QUANTUM OF CHECK	REF. DOCUMENT	RECORD FORMAT	AGENCY	REMARK / CUST. REQ.
1	Raw Material								
	Epoxy Resin	a) VISUAL	B	V	100% Lot-wise	BP 22463	SUPPLIER'S TC	MFR	CHP
		b) Viscosity	B	T	100% Lot-wise	BP 22463	SUPPLIER'S TC	MFR	CHP
		c) Epoxy Value	B	T	100% Lot-wise	BP 22463	SUPPLIER'S TC	MFR	CHP
		d) Density	B	T	100% Lot-wise	BP 22463	SUPPLIER'S TC	MFR	CHP
2	Assembly								
	SOB	a) VISUAL, marking of traceability details as per drg	C	M	100%	As Per BHEL Drg/spec	SUPPLIER'S TC	MFR	CHP
		b) Dimension Check	A	T	100%	As Per BHEL Drg/spec	SUPPLIER'S TC	MFR	CHP
		c) Finish	A	V	100%	As Per BHEL Drg/spec	SUPPLIER'S TC	MFR	CHP
		d) Type Test (Dry PF test, PD test)	A	T	SAMPLING	As Per BHEL Drg/spec	Test Lab reports	NABL accredited	CHP
		e) Acceptance Test	A	T	SAMPLING	As Per BHEL Drg/spec	Test Lab report	MFR	CHP
		f) Packing	B	V	100%	As Per BHEL Drg/spec	SUPPLIER'S TC	MFR	CHP
KEY TO SYMBOLS:- A = CRITICAL B = MAJOR C = MINOR M = MEASUREMENT T = TEST V = VISUAL									
NOTE :									
1) TCS & INTERNAL INSPECTION REPORT SHALL BE PROVIDED TO BHEL ALONG WITH EACH SUPPLIED LOT.									

COPY RIGHT AND CONFIDENTIAL
The information on this document is the property of BHEL Bhopal
It must not be used directly or indirectly in any way detrimental to the interest of the company

Revisions:

ALTD:
APPD:

Date:

PRINTS TO:- MM (SCR) -1, SWM (Plg) -1

Approved: H. R Patel

Prepared:
AD

Issued:
NM

Date: 12.07.19



PLANT PURCHASING SPECIFICATION BHOPAL

BP 22463

REV NO. 08

PAGE 1 of 3

SUPERSEDES
BP 22463 Rev.07

SILICA FILLED EPOXY MOULDINGS

1. GENERAL:

This specification governs the quality of silica filled epoxy mouldings made from suitable quantity of cast epoxy resin and hardener of α - α Di amino di phenyl methane system with calcined silica flour (250 / 400 mesh). The material has a temperature index of at least 120

2. APPLICATION:

Used for slot mouth packing block of AC machines, etc.

3. COMPLIANCE WITH NATIONAL STANDARDS:

There is no Indian standard for this type of material.

4. DIMENSIONS AND TOLERANCES:

Shall be stated on order or the drawing accompanying the order.

5. COMPOSITION:

5.1	Cast epoxy resin (CY 205 of M/s CIBA GEIGY or equivalent)	Parts by weight 100
5.2	Hardener α - α Di amino diphenyle methane (HT 972 or HT905 of M/s CIBA GEIGY or equivalent)	27
5.3	Calcined silica Flour (250/400 mesh)	175 \pm 25

6. COLOUR : Natural

However any other colour can also be ordered.

7. FINISH :

The moulded material shall be smooth, compact, bright and free from cracks, blisters, gas pockets, foreign inclusions and with uniformly distributed bond.

Revision :

Reviewed & brought upto date.

Issued by :

STANDARDS AND MATERIALS GROUP
TECHNICAL SERVICES DEPTMENT

Rev. 08

Date: 12.02.2022

Date of first Issue :23.01.1980



PLANT PURCHASING SPECIFICATION BHOPAL

BP 22463

REV NO. 08

PAGE 2 of 3

8. TEST METHODS :

Unless otherwise specified, the tests shall be conducted in accordance with the relevant methods of AA 085 17 01.

9 SAMPLE FOR TEST:

The set of moulded test specimens, as given below, prepared from the same batch shall be supplied for testing and approval.

(3 ± 0.2) mm tk x (50 ± 1) mm square : 4 Nos.

(3 ± 0.2) mm tk x (13 ± 0.5) mm width x (75 ± 1) mm length : 5 Nos.

10 ± 0.5 mm tk x 15 ± 0.5mm width x 120 ± 2mm length : 3 Nos.

10 PHYSICAL PROPERTIES:

10.1 Density: 1.7 to 1.9g/cc (by weight / volume method)

10.2 Water Absorption at Room Temperature:

0.4 %, Max. (Tested on specimen of size 50 x 50 x 3 mm).

10.3 Marten's Heat Distortion Temperature: 135°C Min.

10.4 Machinability:

Shall be freely machinable and capable of being cut with an ordinary saw without showing any signs of splitting, cracking or chipping.

11 MECHANICAL PROPERTIES:

11.1 Cross-Breaking Strength: 80 N / mm² Min.

12 TEST CERTIFICATE:

Unless otherwise specified three copies of test certificates shall be supplied.

In addition, the supplier shall ensure to enclose one copy of test certificate along with their dispatch documents to facilitate quick clearance of the material.

**PLANT PURCHASING SPECIFICATION
BHOPAL****BP 22463****REV NO. 08****PAGE 3 of 3**

The test certificate shall bear the following information:

BP 22463 (Rev 08) : Silica Filled Epoxy Mouldings.

BHEL Order No.

Batch / Lot No.

Test values obtained / Certificate for compliance for Cl. 5, 6, 7, 10 & 11 and dimensions as per order / drawing.

13 PACKING & MARKING:

The moulding shall be suitably packed to avoid contamination and damage during transit and storage. Each package shall be marked with the following information:

BP 22463: Silica Filled Epoxy Mouldings.

BHEL Order No.

Manufacturer's and/or supplier's Name & grade

Batch / Lot No.

Drawing and item Nos.

Test Certificate Reference