



PRODUCT STANDARD
SWITCHGEAR ENGINEERING DIVISION

SG 12730 Rev.No.:01

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GLASS FILLED NYLON MOULDINGS

1. GENERAL

This specification governs the quality of glass filled Nylon mouldings made from Nylon 66 based 30 % glass fiber reinforced flame retardant grade Engineering plastic materials to Drg. No.: 35211001623 & 45211001539.

2. APPLICATIONS

These mouldings are used as insulating shrouds for isolating contact assy. and bus bar joints etc in medium voltage switchgear panels.

3. COLOUR

The-colour of mouldings shall be as specified on item drawing.

4. PROPERTIES

Important properties are as following:

PROPERTY	UNIT	TEST METHOD	VALUE
<u>PHYSICAL</u>			
Specific gravity	-	ASTM-D792	1.3 to 1.5
Glass content	% by weight	-	25 to 30
Water absorption	%	ASTM-D570	0.5 max
<u>FLAMMABILITY</u>			
Flame Class	Class	UL94	Vo
<u>ELECTRICAL</u>			
Dielectric strength	kV/mm	ASTM-D149	> 24

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REV.	01	PRINTS TO :-		APPROVED -		
ALTD.	NB	QCX (SCR)	1	R.K. SHUKLA		
APPD.	RKS	PD&D	1	PREPARED	ISSUED	DATE
DATE.	28-07-2000	SWM(PLNG)	1	SMM	BPN	31-08-1995



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PROPERTY	UNIT	TEST METHOD	VALUE
Volume resistivity	Ohm-cm	ASTM-D257	$> 10^{14}$
Surface resistivity	Ohm	ASTM-D257	$> 10^{12}$
Comparative Tracking Index	-	IEC 112-1979	> 600
Arc Resistance	Sec	ASTM-D495	> 180
<u>MECHANICAL</u>			
Tensile strength	Mpa	ASTM-D638	> 100
Flexural strength	Mpa	ASTM-D790	> 130
Impact strength	Kg cm/cm	ASTM-D256A	> 6
<u>THERMAL</u>			
Melting point	Deg. C	ASTM-D2117	> 215

5. FINISH :

The mouldings shall be smooth and free from surface imperfections and blowholes.

6. ACCEPTANCE CRITERION :

- Six no. samples in size 3tk x 150 mm x150 mm moulded from the same batch and in the same manner as the mouldings consignment concerned, shall be supplied for testing and approval at BHEL works. After approval & establishment of material for initial two lots of supplies, test values of properties glass content, water absorption, dielectric strength and flammability as stated in Para 4 shall be met with for acceptance of the lot.
- Power frequency high voltage withstand test of 40 kV rms for one minute shall be conducted on min. five no samples per lot of the item.

7. IDENTIFICATION :

Supplier shall emboss following markings at location (*) shown on drawings :

- Suppliers name or logo.
- Mfg. date or production batch no.

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