



PRODUCT STANDARD
SWITCHGEAR ENGINEERING DIVISION

SG 10701 REV.04

PAGE 1 OF 2

FLAME RETARDANT POLYCARBONATE (EXTRUDED) SHEETS

1. GENERAL:

This specification governs the requirements of extruded thermoplastic polycarbonate sheets, made from resin "LEXAN" Grade 953A of M/s GE Plastics India make or equivalent, free from surface imperfections and blow holes. The extruded sheets shall be highly resistant to mineral and organic acids, oxidation and reduction agents, neutral and acid salt solutions, fats and oils, saturated aliphatic and cycloaliphatic hydrocarbons and alcohols except methyl alcohol. Material shall have temperature index of at least 130.

2. APPLICATION:

Used as insulating barriers and shrouds in switchgear panels.

3. SIZES:

Preferred sizes are:

Thickness : 2, 2.5 3, 4, and 5 mm

Sheet size : 880x1220 and 880x1820 mm

4. COLOUR:

Transparent clear (uv stabilised)

5. PROPERTIES:

Important properties are as following:

PROPERTY	UNIT	TEST METHOD	VALUE
MECHANICAL			
Tensile strength	MPa	ISO 527	65 min
Tensile Elongation	%	ISO 527	110 min
Flexural Modulus	MPa	ISO 178	2300 min
Izod Impact (Notched)	KJ/m sq.	ISO 180-1A	60 min

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of Bharat Heavy Electricals Limited
It must not be used directly or indirectly in any way detrimental to interest of Co.

REV.	04	PRINTS TO :-		APPROVED -		
ALTD.		SWM(PLNG)		RB		
APPD.		QCX (SCR)		PREPARED	ISSUED	DATE
DATE.	27.7.2K	PD & D		HLP	SMM	14.5.93



PRODUCT STANDARD
SWITCHGEAR ENGINEERING DIVISION

SG 10701 REV.04

PAGE 2 OF 2

ELECTRICAL

Dielectric strength (proof)	KV/mm	IEC 243	>15
-----------------------------	-------	---------	-----

FLAMMABILITY

Flame class	Class	UL94	Vo
-------------	-------	------	----

PHYSICAL

Density	Kg/mxm xm	ISO 1183	1.21 +/- 5%
---------	-----------	----------	-------------

Water absorption (after 24 hours)	%	ISO 62	0.15 max
-----------------------------------	---	--------	----------

6. ACCEPTANCE CRITERIA:

- Supplier shall send test certificates for mechanical, electrical, flammability and physical properties for each production batch.
- Two nos. sample sheets of size 3 thickx300x300mm shall be supplied with each lot for testing at BHEL works. Test values for properties water absorption, dielectric strength and flammability as stated in para 5.0 shall be met with for acceptance of the lot.

7. IDENTIFICATION:

Supplier shall provide appropriate markings on each sheet giving following details:

- Suppliers name
- PO no and date
- Production batch no. and date

8. PACKAGING, STORAGE AND HANDLING:

The sheets when supplied shall be provided with transparent protective film which can be peeled off during use. This protective film should prevent scratches during handling.

The sheets shall be stacked over one another and packed in wooden crates with internal lining of 150 micron thick polyethelene sheet and bitumen coated Hessian reinforced craft paper.

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of Bharat Heavy Electricals Limited
It must not be used directly or indirectly in any way detrimental to interest of Co.