SPECIFICATION OF SEMI-FINISHED PRODUCT PI Fo 1

1. General :

1.1 Scope :

This instruction lays down all the requirements which are made for the semi-finished product PI Fo 1.

1.2 Description, Definition

PI Fo 1 is an aromatic polyimide foil ("Kapton").

1.3 Product Designation

For semi-finished product	Designation test
Width	Bn thickness x width - PI Fo 1

1.4 Dimensions

See order.

1.5 Delivery Documents, Destination for delivery

See order.

1.6 Order

The order is the summary of the particulars and regulations that apply to the delivery. BHEL reserves the right to test all the requirements listed, test material for which is included in the order. The order can contain requirements which differ from or supplement instruction (except the section 2.1 "Properties").

1.7 Supplier's product Designation

Semi-finished product PI Fo 1 must receive from the supplier a designation of quality which must be changed if alternations are made to the composition, the quality of the raw materials the method of manufacture or other factors that could influence the technological properties of the semi-finished product.

1.8 Acceptance of new products:

Attainment of the properties listed is not in itself sufficient for the acceptance of new, previously unaccepted products. Only if after particular experiments, practical service tests and if necessary other considerations have been taken into account, it appears that the new product is acceptable and interchangeable, may we decide to convert to it.

1.9 Comparison/ Reference to Standards:

DIN. 40634, Type F 1410 (only partly matching)
This specification is equivalent to ABB / CLW specification HZN 02575.

2.1 Properties:

Code	Size, term	Unit	Values				Test method
90100	Thickness	mm	0.025	0.050	0.075	0.125	--
	Perm. deviation		± 0.002	± 0.004	± 0.006	± 0.010	
01150	Mass per unit area	g/m^2	36	72	108	180	DIN 53352
	Perm. deviation		± 4	± 7	± 10	± 15	
10050	Tensile strength at $23^{O}C$.	N/mm^2	> 160				ISO 1184
11550	Elongation at rupture at $23^{O}C$.	%	> 50				ISO 1184
35300	Dielectric strength at $23^{O}C$.	kV/mm	> 220	> 180	> 160	> 120	IEC 243 (=DIN 53481, VSM 77107)
74450	Shrinkage after 30 min. at $300^{O}C$.	%	≤ 0.5				DIN 40634 page 1 Section2.9.3

Note: The code numbers in section 2.1 serve as internal function key and have therefore no significance for the supplier.

2.2 Consignment

2.2.1 Form of the Consignment

In widths wound on cores with an inside diameter of 76 mm.
Outside diameter of the rolls approximately 152 mm

2.2.2 Packing

The individual shipments are to be packed so that no damage can arise during transport.

2.2.3 Transport

The consignment must be delivered by rail or road so that it can be unloaded by crane or forklift truck without special facilities. The space between the floor of the vehicle and the individual packages, and between layers of packages, must be at least 10 cm.

2.2.4 Identification

Each item of the consignment (crate, palette, roll etc.) must be labeled securely and indelibly (e.g. with an adhesive label or an appendage) with the following details : BHEL designation text of product and identification number quantity and eventually batch and test numbers.

2.3 Permissible variations

2.3.1 Dimensions

For thickness see section 2.1 “Properties"
For width b ± 5%