

OBJS2 System Component, Electrical Insulation - Component		E200050
P LEO & CO (B C) LTD PO BOX 94250 RICHMOND BC V6Y 2A6 CA		
System Component	System Designation	System Temp (Class)
1P9FR, 1A025, 1PEN2, 1H86A, 1PN2R, 1PEN3, 1H86R, 2T-TFT.xx, 2T- TFL.xx, 1H802, 2T- TFS.xx, 1H801, 1H803, 1PG888, 1PEN3R, 1N012, 1G006, 1G015, 1P130, 1H860, 1K063, 1C821, 1H850, 1PK825, 1PN820, 1PN828, 1G130, 1G155, 1G180, 1K7170, 1K7177, 1K7270, 1P700, 1P702, 1P705, 1P707, 1P717, 1P808, 1P800, 1P801, 1P802, 1P830, 1N008, 1N155, 1P133, 1P135, 1H818, 1H868, 1P701	H82	180(H)
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Construction Details (Table I)

The use of this insulation system is limited to the combination of materials specified below. Where more than one item is designated under Insulation Function, they may be used together, unless otherwise indicated, or they may be used as alternates to one another. Functions designated "optional" are not necessarily required for every design. Insulation thicknesses and/or layers indicated below are minimum.

Winding Wire

- Recognized Component - Magnet wire (OBMW2), single build or greater, round or rectangular listed below or
- Recognized Component - Single and Multi-Layer Insulated Winding Wire (OBJT2) listed below or
- Recognized Component - Appliance Wiring Material (AVLV2) listed below

(unless otherwise noted, winding wire types listed below may be used in combination within a single product)

MW 35 or 200C Polyester-amide-imide (Polyamide-imide)

Bare Conductor - insulated with any Nomex Ground in this table 2mils (0.051mm) min. OR PTFE or Silicone Lead wire (w/ or w/o glass braid) insulated with Kaladex 2000 or P. Leo Ground

Insulation in this table, 1mil (0.025mm) min. All 50% overlap,

Ground & Interwinding Insulations

Designation (no.)	mils(mm) comments
BASF (Honeywell)	
Petra 130	20 (0.51)
Dupont Teijin Films	
Kaladex PEN 2000	1 (0.03)
Teonex Q51	1.0 (0.03) PEN
E. I. Dupont de Nemours & Co.	
Nomex 410	5 (0.13) aramid insulating paper
Nomex 411	11.5 (0.29) aramid insulating paper
Nomex 414	5 (0.13) aramid insulating paper
Nomex 416	5 (0.13) aramid insulating paper
Nomex 418	5 (0.13) aramid insulating paper
Nomex 424	5 (0.13) aramid insulating paper

Nomex 425	5 (0.13)	aramid insulating paper
Nomex 992	10 (0.25)	aramid insulating paper
Nomex 993	8.25 (0.21)	aramid insulating paper
Nomex 994	8.25 (0.21)	aramid insulating paper
Nomex E56A	7.5 (0.19)	aramid insulating paper
Rynite 530	20 (0.51)	polyethylene terephthalate (PET)
Rynite FR530	20 (0.51)	polyethylene terephthalate (PET)
Innovative Paper Technologies, LLC		
CeQuin 3000	5 (0.13)	
TufQuin 110	5 (0.13)	
P. Leo		
1PEN2	1 (0.03)	Recognized Component - Insulating Tape (OANZ2)
1PEN3	1 (0.03)	Recognized Component - Insulating Tape (OANZ2)
1PN2R	1 (0.03)	Recognized Component - Insulating Tape (OANZ2)
1PN3R	1 (0.03)	Recognized Component - Insulating Tape (OANZ2)

Lead Wires (optional)

200 PTFE - polytetrafluoroethylene
 200 SI - silicone rubber - with or without glass braid

Minor Sheet Insulations (optional) layer, outer, wrap etc.

Any sheet insulation or tape described in this table with no minimum thickness requirement.

Designation (no.)	comments
Cotrell Paper Co Inc.	
Copaco 125	
Miki Tokusys Paper mfg.	
PB-2	press board paper
P. Leo	
D/M###	### = layer thickness in mils
DMD###	### = layer thickness in mils
DPD###	### = layer thickness in mils
N/H/N###	### = layer thickness in mils
N/M###	### = layer thickness in mils
N/PEN/N-###	### = layer thickness in mils
NMN-###	### = layer thickness in mils
NTN-###	### = layer thickness in mils
RP65	
SM61	
SR315T	
SR853T	
TK-####	# - represents thickness layer in mils
TP-####	# - represents thickness layer in mils
Protectolite	
1030HT	
Riegel Products (James River)	
Glassine Paper	

Cores, Tube, Bobbins (optional) (for mechanical support only)

Designation (no.)	comments
Chang Chun Plastics	
PBT-4130	
T373J	

T375J
Paramount Tube
 ParaQuin
 ParaQuin F
 Rigid ParaQuin
 Rigid ParaQuin F
Precision Paper Tube Co.
 FR9000
 Heat-Shrink Mylar
 Pyroform 310
 Resinite 8108
 Resinite 8111
 Resinite 8717
 Resinite 9120
 Resinite 9120-1
 Thermoform 1000
 Thermoform 255
 Thermoform 700
 Thin Wall P-100
 Thin Wall P-30
 Thin Wall P-60

Kapton film with amide-imide binder

Tapes (optional)

Designation (no.)	comments
P Leo & Co (B C) Ltd	
1A025	
1C821	cotton cloth
1G006	aramid fiber (Nomex) paper
1G015	silicone adhesive, glass cloth
1G130	glass cloth
1G155	glass cloth
1G180	glass cloth
1H801	
1H802	
1H803	
1H818	reinforced PET, rubber adhesive
1H850	polyester film
1H860	acrylic adhesive, polyester film
1H868	reinforced PET, acrylic adhesive
1H86A	
1H86R	
1K063	silicone adhesive, polyimide film
1K7170	Kapton film
1K7177	Kapton film
1K7270	Kapton film
1N008	aramid fiber (Nomex), rubber adhesive
1N012	PET film, acrylic adhesive
1N155	aramid fiber (Nomex), rubber adhesive
1P130	acrylic adhesive, polyester film
1P133	PET film, acrylic adhesive
1P135	PET film, acrylic adhesive
1P700	polyester film
1P701	polyester film
1P702	polyester film
1P705	polyester film
1P707	polyester film
1P717	polyester film
1P800	polyester film
1P801	acrylic adhesive, polyester film
1P802	acrylic adhesive, polyester film
1P808	polyester film
1P830	acrylic adhesive, polyester film

1P9FR	
1PEN2	
1PEN3	
1PEN3R	
1PG888	
1PK825	polyester knit
1PN2R	
1PN820	woven polyester cloth
1PN828	woven polyester cloth

Spacers and Wedges (optional)

Any material described in this table with no thickness requirement.

Designation (no.)	comments
Glastic Corp.	
1580	
1583	
FHT	
MTS	
SG-200	
TSF	polyester/glass
UTS	
Haysite	
EHC	glass reinforced thermosetting polyester
EHG-S	
EMD	
ETS	NRMA GPO-1 130
ETS-FR-II	
HST-II	glass reinforced thermosetting polyester
Hilec (Brand Rex, Voltube)	
Poltrudid Rod	
Nohl	
APO-1	
APO-2	
APO-3	
Resolite	
Supersil Polyglas	
Technical Pultrusions	
Glass Polyester Poltruded Rod	

Sleevings (optional)

Designation (no.)	comments
Atlantic Tubing	
TFL	
TFS	
TFT	
Federal Mogul (Bently Harris)	
1062	silicone rubber coated fiberglass
Ben Har 1151-FR	
Ben Har 1151-XL-200	silicone rubber coated fiberglass
Ben Har 1151-XL-220	
Ben Har 1151-XL-240	
Ben Har Acryl	
Ben Har Ex Flex (std)	
Ben Har Ex-Flex 1500	
Ben Har ST (std)	
Ben Har ST-1250	
Vinylglass	
Fluo Tech Industries	
TFL	
TFS	

TFT
Great Holding
LeoFlon LW
LeoFlon SW
LeoFlon TW
Hilec (Brand Rex, Voltube)
HT
HTS
Hilec Series 200
Hilec Series 300
Hilec Series 400
Hilec Series 500
Hilec Series 600
Hilec Series 700
Hilec Series 800
Turbo 117E
Turbo 117F
Turbo 117G
Turbo 117U
Turbo TUF
Turbocryl
Vol-Cryl
Vol-Flex
Vol-Glas
Vol-Glas P
Vol-Sil
Hitachi
Heat Shrink Tube M2
Kurabe
HG-20E
Natvar
Acryliglas
Natglas
Natglas T & D
Natvar 400/461
Silicone Rubber Coated Fiberglass
Vinyl Coated Glass Grade A
Vinyl Coated Glass Grade B
Vinyl Coated Glass Grade C
Nichias
9003-150@
9003-300@
9003-60@
Nitto Denko
1225
P. Leo
2T-TFL.xx teflon tube
2T-TFS.xx teflon tube
2T-TFT.xx teflon tube
Raychem Corp.
Thermofit RNF-100
Remtek
CFR-125
Sofanou (Jenisco)
AW 751
Suflex (Essex)
Suflex Acrylflex VPI
Suflex Flexicone 200
Silverflex
Suflex Vinylglas
Sumitomo
Sumitube F2
Varflex
Varglas 343 acrylic F-A-1
Varglas A397 F-A-1

Varglas A397 F-C-1
 Varglas Non-Fray Type H
 Varglas Non-Fray Type HM
 Varglas Non-Fray Type HO
 Varglas Non-Fray Type HP
 Varglas S1600
 Varglas Silicone Resin
 Varglas Silicone Rubber ES 4400
 Silicone Rubber H-A-1
 Silicone Rubber H-C-1
 Silicone Rubber H-C-2
 Varfil B-A-1
 Varfil B-C-1
 Varflo B-A-1
 Varflo B-C-1
 Varglas Viton 231

Various Manufacturers

Untreated Fiberglass

Zeus

TFE-LW
 TFE-SW
 TFE-TW

Tie Cords (optional)

Designation (no.)	comments
Varflex	
46	silicone coated fiberglass
48	silicone coated fiberglass
Western Filament	
DHS Series	
DPS Series	
DRT Series	

Potting Compounds (optional)

Designation (no.)	comments
EpoxyLite Corp.	
8705	
8822	

Varnishes (optional) Recognized Component - Varnishes (OBOR2)

Designation (no.)	comments
P. D. George Co	
Ripley Resin 468-2(+)	(+) - May be replaced by prefix "E" and may be followed by a one to five alphanumeric suffix indicated percent of inert filler and/or color.