

YOUNG CHANG SILICONE CO LIMITED

Room 803, Chevalier House, 45-51 Chatham Road South, Tsim Sha Tsui, Kowloon HK

System Component
STW-F-xx, STW-F-SB-xx

System Designation
YCI-155

System Class
155(F)

Report Date: 2021-10-28

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alternate constructions: [Table II](#)

Construction Details (Table II)

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 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 below minimum.

Note: Note: Insulated winding wires designated STW-F-xx, STW-F-SB-xx are suitable for use in this insulation system without additional ground or interwinding insulation

Filament Wire

Additional Ground & Interwinding insulation **is not** required to separate this winding from other windings or between this winding and grounded/dead metal
 Recognized Component Single and Multi-Layer Insulated Winding Wire (OBJT2) listed below
 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

YOUNG CHANG SILICONE CO LIMITED [E242198] - Recognized Component
STW-F-xx, STW-F-SB-xx 3.9 (0.1)

Enameled Wire

Recognized Component - Magnet wire (OBMW2), single build or greater, round or rectangular, copper or aluminum unless stated otherwise for the types listed below
 Ground Insulation is required to separate this winding from grounded/dead metal
 Interwinding Insulation **is** required to separate this winding from other enameled wire
 Unless otherwise noted, Winding Wire types listed below may be used in combination within a single product

<u>ANSI Type</u>	<u>Temp(°C)</u>	<u>Basecoat(Topcoat)</u>
MW 30	or 180°C	Polyester-amide-imide
MW 35	or 200°C	Polyester-amide-imide (Polyamide-imide)
MW 36	or 200°C	Polyester-amide-imide (Polyamide-imide)
MW 37	or 220°C	Polyester (Polyamide-imide)
MW 38	or 220°C	Polyester (Polyamide-imide)
MW 73	or 200°C	Polyester-amide-imide (Polyamide-imide)
MW 74	or 200°C	Polyester-amide-imide
MW 76	or 180°C	Polyester-amide-imide (Polyamide)
MW 79	or 155°C	Polyurethane
MW 80	or 155°C	Polyurethane (Polyamide)
MW 82	or 180°C	Polyurethane
MW 83	or 180°C	Polyurethane (Polyamide)

Ground and Interwinding Insulations

<u>Designation</u>	<u>mils(mm)</u>	<u>comments</u>
<u>CELANESE INTERNATIONAL CORP [E344082] - Recognized Component</u>		
ZENITE 7130	11.8 (0.3)	
ZENITE 9140HT(f1)	11.8 (0.3)	
ZENITE 9140HT(f2)	11.8 (0.3)	
<u>CELANESE INTERNATIONAL CORP [E41938] - Recognized Component</u>		
Rynite FR530(l)(+)(f1), FR530L(l)(+)(f1)	15 (0.38)	
Zytel HTNFR52G30LX	15 (0.38)	
Zytel HTNFR52G30NH(r6)	15 (0.38)	
<u>E. I. Dupont de Nemours & Co.</u>		
Kapton CR	1 (0.03)	
Kapton HN	1 (0.03)	
<u>P LEO & CO LTD [E126174] - Recognized Component</u>		
1K063	1 [layers]	
1K063CR	1 [layers]	
1K1CR	1 [layers]	
1K7177 *** this product is no longer Recognized ***	1 [layers]	
1K7178	1 [layers]	
1K7200	1 [layers]	
1K7220	1 [layers]	
1KPST	1 [layers]	
1PEN2	1 [layers]	
1PEN3	1 [layers]	
1PN2R	1 [layers]	
1PS25	1 [layers]	
<u>P. Leo</u>		
1K717	1 [layers]	
<u>SUMITOMO BAKELITE CO LTD [E41429] - Recognized Component</u>		
SUMIKON PM-9630	11.8 (0.3)	
SUMIKON PM-9820, PM-9825	11.8 (0.3)	
<u>SUMITOMO CHEMICAL CO LTD [E249884] - Recognized Component</u>		
SUMIKASUPER E4008(c4)(c2)(c3)(j)(f2)		
<u>TOYOBO FILM SOLUTIONS LIMITED [E206562] - Recognized Component</u>		
Teonex Film Q(l)(m), NQ(l)(m), K(l)(m) *** this product is no longer Recognized ***	1 (0.03)	

Lead Wires

lead wires are optional for this system

<u>Temp</u>	<u>Insulation</u>
125°C	XLPE - crosslinked polyethylene +
150°C	SR - silicone rubber(with or without braid)
150°C	XLPE - crosslinked polyethylene
150°C	Perfluoro-alkyl vinyl ether/Al/PET/EVA

200°C SR - silicone rubber(with or without braid)
 200°C FEP - fluorinated ethylene propylene
 200°C ETFE - ethylene tetrafluoroethylene

+ To be isolated from direct contact with windings (magnet wire) by any insulating material (tape, layer insulation, sleeving,etc.) listed in this table - unless specifically exclude requirement by a special note at the beginning of this table.

Minor Sheet Materials

(layer, outer, wrap etc.) minor sheet is optional for this system

Designation comments

Dupont -Teijin Films
 Teonex Q51

DuPont Specialty Products USA, LLC [E34739] - employing Recognized materials

Nomex® 410
Nomex® 411
Nomex® 414
Nomex® 416, 416 LAM
Nomex® 418, 818, 864LAM
Nomex® 464, 464 LAM

P. Leo
 PB-2

any sheet insulation or tape described in this table with no minimum thickness requirement may be used as a minor sheet material

Tapes

tapes are optional for this system

Designation comments

3M COMPANY [E17385] - Listed or Recognized Component

10 (a) *** this product is no longer Recognized ***
 1350Y-1 (b) *** this product is no longer Recognized ***
1350Y-2 (c)
Super 10 (a)

P. Leo & Co.(B.C.)Ltd
 1E075

Additionally requires use of suitable Ground insulation in this syst
 foil and windings
 silicone adhesive, polyimide film
 acrylic adhesive, polyester film

1K7172
 1P830
 1P9FR
 1PETS
 1PG888

P LEO & CO LTD [E126174] - Listed or Recognized Component

1A025
 1A570 *** this product is no longer Recognized ***
1C821
 1C822 *** this product is no longer Recognized ***
 1CC02 *** this product is no longer Recognized ***
1G006
1G180
1G200
1G20B
 1G22A *** this product is no longer Recognized ***
1H818 (m)
1H850 Black (q)
1H850 Natural (o)
1H866 (g)
1H86A (o)
1H86R (g)
1K063
1K063CR
1K06A
1K125
1K1CR
1K220
1K7170
 1K7177 *** this product is no longer Recognized ***
1K7178
1K7200
1K7270
1KLMN
1KPST
1N012
1N155
1P350 (e)
1P700 (b)
1P701 (b)
1P702 (b)
1P703
1P705
1P756 (h)
1P801
1P802
1P802 (k)
1P802B
1P833 xx (@)
1PEN2
1PEN3
1PG880 (o)
1PG887 (o)
1PN2R
1PN3R
1PN820 (o)
1PN828 (o)
1PS25
1TT02

Core tubes and Bobbins

(for mechanical support only) cores are optional for this system

Designation

comments

CELANESE INTERNATIONAL CORP [E41938] - employing Recognized materials

Rynite FR330 *** materials are no longer Recognized ***

Rynite FR515(f1)

Rynite FR530(l)(+)(f1), FR530L(l)(+)(f1)

Zytel 70G30L

Zytel 70G33HS1L(+)

Zytel 70G33HSL(+)

Zytel 70G33L(+)

Zytel FR50(+)(f1)

CHANG CHUN PLASTICS CO LTD [E59481] - employing Recognized materials

LONGLITE 4130

DSM Engineering Plastics

Akulon IG-S250F6

Spacer and Wedges

spacer and wedges are optional for this system

Designation

comments

E. I. Dupont de Nemours & Co.

Nomex Board

any material described in this table with no thickness requirement may be used as a spacer or a wedge

Tubing and Sleeving

tubing and sleeving are optional for this system

Designation

comments

P LEO & CO LTD [E176865] - Recognized Component

2S1yy-xx.x (a)

2S2yy-xx.x (a)

2T-TFL-xx.x (a)

2T-TFS-xx.x (a)

2T-TFT-xx.x (a)

P LEO & CO LTD [E195829] - Recognized Component

2R-SG# *** this product is no longer Recognized ***

2R-SG-1# *** this product is no longer Recognized ***

2R-SG-2# *** this product is no longer Recognized ***

2R-SG-3# *** this product is no longer Recognized ***

P. Leo & Co Ltd

2R300

SUMITOMO ELECTRIC FINE POLYMER INC [E48762] - Recognized Component

811 or Sumitube F2 *** this product is no longer Recognized ***

SUMITUBE F32

Potting Compounds

potting compounds are optional for this system

Designation

comments

SHIN-ETSU CHEMICAL CO LTD [E48923] - employing Recognized materials

KE-402(s) *** materials are no longer Recognized ***

Varnishes

varnishes are optional for this system

Designation

comments

ELANTAS PDG, Inc. [E75225] - Recognized Component

468-2 (d), 468-2FC (d), 468-2-7-xxF (d), 468-2-7FC-xxF (d)

87V-456, 77X-010, 77X-010F

Isonel 31-398, Isonel 32RF, Isonel 31-863, Isonel 31-863X, Isonel 30

V1630, V1630FS, V1630FS50, V1630FS Black, 80361, 80361FS

Not suitable for use with Polyurethane basecoat magnet wire Typ MW82, MW83

Y-210, Y-210BLK, Y-210 BLACK, Y-210 Grey, Y-210PS Thermodur, EB 920

Miscellaneous Minor Insulations

miscellaneous minor insulations are optional for this system

Designation

comments

GUANGDON SHENGYI SCI TECH CO LTD

S6015(b)

FR-4 Core with Epoxy (EP) dielectric, High density interconnect -

Various Manufacturers

Recognized Component (QMTS2) Epoxy resin coated copper foil for use in multilayer printed in combination with ANSI Grade FR-4 wiring boards