Electrical Insulation System Components

YOUNG CHANG SILICONE CO LTD

481-7 GASAN-DONG, KUMCHUN-GU, SEOUL 153-803 KR

System Component STW-B

System Designation YCI-130

System Class 130(B)

Report Date: 2006-09-27

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E303298

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 togel 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.

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 LTD [E242198] - Recognized Component STW-B

3.7 (0.09)

mila/mm)

Single- and Multi-layer Insulated Winding Wire - (

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 <u>is</u> 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

ANSI Type	<u>Temp(°C)</u>	Basecoat(Topcoat)
MW 28	and 130°C	Polyurethane (Polyamide)
MW 75	and 130°C	Polyurethane
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

Designation	mils(mm)	comments
3M COMPANY [E17385] - Recognized Component		
1 (a)	1 [layers]	
1298 (b)	1 [layers]	
1298ČŘ	1 [layers]	
1318-1 (a)	2 [layers]	
1318-2 (a)	1 [layers]	
1350-1 (b)	2 [layers]	
1350-2 (c)	1 [layers]	
1350CR-1	2 [layers]	
1350CR-2	1 [layers]	
1350F-1 (b)	2 [layers]	
1350F-2 (c)	1 [layers]	
1350T-1 (b)	2 [layers]	
1350T-2 (b)	1 [layers]	
1350T-3 (b)	1 [layers]	
1351-1 (a)	2 [layers]	
1351-2 (c)	1 [layers]	
1351T-1 (a)	2 [layers]	
1351T-2 (a)	1 [layers]	
44-T (a)	1 [layers]	
44D (a)	1 [layers]	
5	1 [layers]	
54 (a)	1 [layers]	
55	1 [layers]	
56 (a)	1 [layers]	
57 (a)	1 [layers]	
58 (a)	1 [layers]	
74 (a)	1 [layers]	
75 (a)	1 [layers]	
Super 10 (a)	1 [layers]	
• • • • •	i [layers]	
CELANESE INTERNATIONAL CORP [E344082] - Recognized Component		
ZENITE 6130(+)	11.8 (0.3)	
<u>DuPont Specialty Products USA, LLC [E34739] - Recognized Component</u>		
Nomex® 410	2 (0.05)	
Nomex® 411	5 (0.13)	
Nomex® 414	2 (0.05)	
Nomex® 418, 818, 864LAM	2 (0.05)	
Nomex® 992, 992PSB	4 (0.1)	
Nomex® 993, 993PSB	3 (0.08)	
Nomex® 994, 994PSB	3 (0.08)	
Nomex® E56, 356	3 (0.08)	
Dupont Teijin Films	* *	
<u>Dupont Teljin Films</u> Mylar	1 (0.03)	polyethylene terephthalate film (PET)
•	1 (0.03)	polyethylene terephinalate IIIII (FET)
E I DUPONT DE NEMOURS & CO INC [E39505] - Recognized Component Kapton® 100H, 100HN, 100HN-S, 100H-ZT, 100HN-ZT, 100FPC-ZT, 100TAB-ZT, 100PST,	1 (0.03)	
100HA, 100TN, 100HN-3, 100HPC, 100FPC-A, 100HPP-ST	i (0.03)	
E I DUPONT DE NEMOURS & CO INC [E41938] - Recognized Component		
Crastin SK665FR(f1)	11.8 (0.3)	
Rynite FR530(I)(+)(f1), FR530L(I)(+)(f1)	11.8 (0.3)	
VIVIV P VIVIV I	V -7	

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HITACHI CHEMICAL CO LTD [E42956] - Recognized Component CP-J-8800, CP-J-NAF, CP-J-F(N)
                                                                                                           15.7 (0.4)
JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD [E165111] - Recognized Component
CT* (b)(g)
PZ* (b)
WF* (c)(h)
                                                                                                           2 [layers]
                                                                                                           2 [layers]
                                                                                                           1 [layers]
METAL LINE CO LTD [E162848] - Recognized Component
800 (a) *** this product is no longer Recognized *** 800BT *** this product is no longer Recognized ***
                                                                                                           3(0.08)
                                                                                                           2 [layers]
NITTO DENKO CORP [E34833] - Recognized Component
3161-FT1
                                                                                                           1 [layers]
3161-FT2
                                                                                                           1 [layers]
31CT-1 (a)
31CT-2 (a)
                                                                                                           1 [layers]
                                                                                                                             Polyester
                                                                                                           1 [layers]
31CTF (a)
                                                                                                           1 [layers]
P LEO & CO LTD [E126174] - Recognized Component
1P756 (h)
                                                                                                           1 [layers]
1P801
                                                                                                           1 [layers]
1 [layers]
1P802
SUMITOMO BAKELITE CO LTD [E41429] - Recognized Component
                                                                                                           15.7 (0.4)
15.7 (0.4)
15.7 (0.4)
SUMIKON PM-9630
SUMIKON PM-9750
SUMIKON PM-9820, PM-9825
SUMIKON PM-9850
                                                                                                           15.7 (0.4)
SYMBIO INC [E50292] - Recognized Component
35660 (a)
                                                                                                           1 [layers]
35661 (c)
                                                                                                           1 [layers]
TERAOKA SEISAKUSHO CO LTD [E56086] - Recognized Component
560S #2
560S #3
560S #5
                                                                                                           1 [layers]
                                                                                                           1 [layers]
                                                                                                           1 [layers]
1 [layers]
561S #2 *** this product is no longer Recognized ***
561S #3 *** this product is no longer Recognized ***
561S #7 *** this product is no longer Recognized ***
                                                                                                            1 [layers]
                                                                                                           1 [layers]
630F #25 (a)
630F2 #50 (i)
631S #25 (a)
631S2 #50 (a)
                                                                                                            1 [layers]
                                                                                                            1 [layers]
                                                                                                            1 [layers]
                                                                                                           1 [layers]
1 [layers]
632S #25 (a)
650S #25
                                                                                                            1 [layers]
650S #50
                                                                                                           1 [layers]
652S #25
                                                                                                           1 [layers]
653F #25
                                                                                                           1 [layers]
654S #25
                                                                                                           1 [layers]
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Lead Wires

lead wires are optional for this system

Temp Insulation 105°C 150°C CPE - chlorosulfonated polyethylene + SR - silicone rubber(with or without braid) Perfluoro-alkyl vinyl ether/Al/PET/EVA XLPE - crosslinked polyethylene 150°C 150°C SR - silicone rubber(with or without braid) 200°C 200°C FEP - fluorinated ethylene propylene

Minor Sheet Materials

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

Designation comments

Dupont -Teijin Films

Polyethylene Terephthalate Film

<u>DuPont Specialty Products USA, LLC [E34739] - employing Recognized materials</u>

Nomex® 410 Nomex® 411

Nomex® 414

Nomex® 416, 416 LAM Nomex® 418, 818, 864LAM Nomex® 992, 992PSB Nomex® 993, 993PSB

Nomex® 994, 994PSB

Nomex® E56, 356

E. I. Dupont de Nemours & Co. Kapton Grades H, V, HN, VN and HA Nomex® 424

Nomex® 425

GE Tosiba Silicone

TSE-3331

TSE-3331K

Sumitomo Bakelite Sumilite VSL, VSS

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

<u>Tapes</u>

tapes are optional for this system

Designation comments

3M COMPANY [E17385] - Listed or Recognized Component

⁺ 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.

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1205
1298 (b)
1298CR
1318-1 (a)
1318-2 (a)
1350-1 (b)
1350-2 (c)
1350CR-1
1350CR-2
1350F-1 (b)
1350F-2 (c)
1350T-1 (b)
1350T-3 (b)
1351-1 (a)
1351-2 (c)
1351T-1 (a)
1351T-2 (a)
1351T-3 (a)
44 (a)
44-T (a)
44D (a)
44D-À (a)
44T-A (a)
54 (a)
55
56 (a)
57 (a)
58 (a)
74 (a)
75
92
MR 94
MR 94B (c)
Super 10 (a)
Super 20 (a)
3M Japan Limited [E59505] - Listed or Recognized Component
2245
CU-35C
SUPER 10-T
SUPER 10-W
BONDTEC PACIFIC CO LTD [E175868] - Listed or Recognized Component
201 (c)
201S (c)
370S (b) 371F (a) *** this product is no longer Recognized ***
Bondtec Pacific Co.
CHYUN YIH TAPE CO LTD [E81174] - Listed or Recognized Component
PB416F
DUCK SUNG HITECH CO LTD [E105147] - Listed or Recognized Component
220-B
231
DTS-230
DTS-241
DTS-280
Duck Sung Hitech Co., Lt 220-F
DTS-204A
INTERTAPE POLYMER GROUP [E20780] - Listed or Recognized Component
51580-00 (40)* (b)
51595* (b)
54113
JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD [E165111] - Listed or Recognized Component
CT* (b)(g)
CT* (c)(g)
PZ* (b)
WF* (c)(h)
METAL LINE CO LTD [E162848] - Listed or Recognized Component 800 (a) *** this product is no longer Recognized ***
800 (a) *** this product is no longer Recognized *** 800BT *** this product is no longer Recognized ***
Nichiban Co. Ltd. 553H-UL
573H-UL
945UL-30
945UL-50
NITTO DENKO CORP [E34833] - Listed or Recognized Component
3161-FT1
3161-FT2
31C
31CT (a)
31CT-1 (a)
31CT-2 (a)
31CTF (a)
343B (a)
343BN@ (a) *** this product is no longer Recognized ***
P Leo & Co (B C) Ltd
 1A605
1E075
 1K7172
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silicone adhesive, polyimide film

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1P130
                                                                                                                     acrylic adhesive, polyester film
1P808
                                                                                                                     polyester film
1P830
                                                                                                                     acrylic adhesive, polyester film
1P9FR
1PN2R
1TF07
P LEO & CO LTD [E126174] - Listed or Recognized Component
1A025
1A570 *** this product is no longer Recognized *** 1C822 *** this product is no longer Recognized ***
1G006
1G130 (o)
1G155
1G180
1G200
1H818 (m)
1H850 Black (q)
1H850 Natural (o)
1H860 (f)
1H86A (o)
1H86R (g)
1K063
1K7170
1K7171A
1N008
1N012
1N155
1P133 (f)
1P135 (c)
1P350 (e)
             *** this product is no longer Recognized ***
1P656 (d)
1P700 (b)
1P756 (h)
1P801
1P802
1P802 (k)
1P833 xx (@)
1PEN2
1PEN3
1PN3R
1PN820 (o)
1PN828 (o)
1TF05
Symbio Inc
N35660Y
SYMBIO INC [E50292] - Listed or Recognized Component
35660 (a)
35660Y (e)
35661 (c)
KA180H
TAE HWA INDUSTRIAL CO LTD [E92677] - Listed or Recognized Component
E-3338
H-2715
H-5673 (+)
S-9101
Taehwa Industries
C-3310
E-3338
H6701
S-2115
TERAOKA SEISAKUSHO CO LTD [E56086] - Listed or Recognized Component
560S #2
560S #3
560S #5
5615 #2 *** this product is no longer Recognized ***
5615 #3 *** this product is no longer Recognized ***
5615 #7 *** this product is no longer Recognized ***
630F #25 (a)
630F2 #50 (i)
631S #25 (a)
631S #38 (d) *** this product is no longer Recognized ***
631S2 #50 (a)
635F *** this product is no longer Recognized ***
636F
650S #50
652S #25
653F #25
654S #25
673AB 0.27 (b) *** this product is no longer Recognized *** 673AB 0.45 (b) *** this product is no longer Recognized ***
673F 0.27 (a)
673F 0.5 (a)
673FG 0.45 (b) *** this product is no longer Recognized *** 678F 0.27 (b) *** this product is no longer Recognized ***
Teraoka Seisakusho Co., Ltd.
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Core tubes and Bobbins

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

Designation

comments

epoxy varnish impregnated nonwoven polyester fabric, acrylic ac

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

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LONGLITE 4130
       LONGLITE T375J(G5)(G6)
       T200NA
       E | DUPONT DE NEMOURS & CO INC [E41938] - employing Recognized materials
       Zytel 101(r9)(f1), 101F(r9)(f1), 101L(r9)(f1), E101(r9)(f1), E101L(r9)(f1)
Zytel 103FHS(+), 103HSL(+), RN5077E(+), E103HSL(+)
       Zytel 70G13L
Zytel 70G30HSL, 70G30HSLR
       Zytel 70G33HS1L(+)
       Zytel 70G33L(+)
       Zytel FR50(+)(f1)
       Hitachi Chemical Co Ltd CD-F-800
       CP-J-8600
       CP-J-8700
       Kolon Industries
KP212V0
       SAMYANG CORPORATION [E121254] - employing Recognized materials
       TRIBIT, Sam Yang's Co. Ltd. PBT 1500GN-30
       SUMITOMO BAKELITE CO LTD [E41429] - employing Recognized materials
       SUMIKON AM-1130, AM-113
SUMIKON PM-9720
       SUMIKON PM-9830
       SUMITOMO CHEMICAL CO LTD [E249884] - employing Recognized materials
       SUMIKASUPER E4008(c4)(c2)(c3)(j)
       TORAY INDUSTRIES INC [E41797] - employing Recognized materials
       1494
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
       <u>Changyuan Electronics Group Co Ltd</u> CB-TT
       <u>Daikin</u>
       FURUKAWA ELECTRIC CO LTD [E58401] - Recognized Component PI-Tube, PIT-S
       GREAT HOLDING INDUSTRIAL CO LTD [E156256] - Recognized Component
       TFL
       TFS
       TFT
       Hoechst
       TFBX7100
       KURABE INDUSTRIAL CO LTD [E52717] - Recognized Component
       SF-2
       LS CABLE & SYSTEM LTD [E84393] - Recognized Component
       NIKKAN INDUSTRIES CO LTD [E55258] - Recognized Component
       NIKKAN INDUSTRIES CO LTD [E72406] - Recognized Component
       S-693-600
       NIKKAN INDUSTRIES CO LTD [E88468] - Recognized Component
       E-651U-2
       NISSEI ELECTRIC CO LTD [E67922] - Recognized Component RSU-1
       Nissei Electric Co., Ltd
       RSU-2
       P LEO & CO LTD [E176865] - Recognized Component
       2T-TFS-xx.x (a)
       P. Leo & Co Ltd
       SUMITOMO ELECTRIC FINE POLYMER INC [E48762] - Recognized Component 811 or Sumitube F2 *** this product is no longer Recognized ***
       <u>SUMITOMO ELECTRIC FINE POLYMER INC [E75077] - Recognized Component</u>
851 or SUMITUBE F4
       Young Woo Co. Ltd.
       YT-130
       Yt-130A
       YT-140
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ZEUS INDUSTRIAL PRODUCTS INC [E64007] - Recognized Component

YT-605 YT-605R TFE-HW-600, TFE-SW-600 TFE-LW-150, TFE-SW-150, TFE-TW-150 TFE-TW-300, TFE-SW-300, TFE-HW-300

Tie Cords

tie cords are optional for this system

Designation

comments

<u>Various Manufacturers</u> Uncoated fiberglass

Varnishes

varnishes are optional for this system

Designation

comments

<u>CHEMTECH CO LTD [E258329] - Recognized Component</u> ES925-43D# *** this product is no longer Recognized and may not be suitable for use in this system ***

ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC [E75225] - Recognized Component

468-2 (d), 468-2FC (d), 468-2-7-xxF (d), 468-2-7FC-xxF (d) V1380, V1380FC, V1380FC Black, 80381FC V1630, V1630FS, V1630FS50, V1630FS Black, 80361, 80361FS

HITACHI CHEMICAL CO LTD [E72979] - Recognized Component WP-2952F-2G, WP-2952F-2G(Y), WP-2952F-2G(YL), WP-2952F-2G (YS), WP-2952F-2G(FC), WP-2952F-2G(H), WP-2952F-2G(K)

John C Dolph Co [E317427] - Recognized Component AC-43, EB-43-HG, EB-43-FB, AC-43-66, EG-43/698-D, EG-43/759-D, ER-43/368-D BC-346A, BC-346-A, BC-346B, BC-346-E, BB-348, BB-346-HF, BC-346HF, BG-346A, BB-

346-A, BB-346/A, BC-370

NOROO PAINT & COATINGS CO LTD [E93947] - Recognized Component

SE KYE CHEMICAL CO LTD [E257443] - Recognized Component SR-337*

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