

VIETNAM E&B TECHNOLOGY COMPANY LIMITED

No 47, Ngoc Han Cong Chua Street Ninh Xa Ward, Bac Ninh City Bac Ninh 220900 VN

System Component	System Designation	System Class
E&B-XXX*YYYYZF, E&B-XXX*YYZF, E&B-XXXF, E&B-XXXF-2, E&B-XXXF-3, E&B-XXXH-3*, E&B-XXXP	EB-155-1	155(F)

Report Date: 2019-05-17

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alternate constructions:

Table II ▼



An Authorization Letter is Required for Adoption of this System

Construction Details (Table II)

Complies with IEC Publication 85

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 ind

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 (OBTJ2) 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

E&B TECHNOLOGY CO LTD [E315265] - Recognized Component	
E&B-XXX*YYYYZF	4.7 (0.12)
E&B-XXX*YYZF	4.8 (0.12)
E&B-XXXF	4.5 (0.11)
E&B-XXXF-2	4.5 (0.11)
E&B-XXXF-3	6.5 (0.17)
E&B-XXXH-3*	5.9 (0.15)
E&B-XXXP	4.7 (0.12)

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

ANSI Type	Temp(°C)	Basecoat(Topcoat)
MW 30	or 180°C	Polyester-amide-imide
MW 35	or 200°C	Polyester-amide-imide (Polyamide-imide)
MW 35-A	or 220°C	Polyester-amide-imide (Polyamide-imide)
MW 36	or 200°C	Polyester-amide-imide (Polyamide-imide)
MW 36-A	or 220°C	Polyester (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 73-A	or 220°C	Polyester-amide-imide (Polyamide-imide)
MW 74	or 200°C	Polyester-amide-imide
MW 74-A	or 220°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)
MW 85	or 180°C	Polyurethane

Bare Conductor - Insulated with Nomex 410, 414, 418 min thickness 3 mil

Ground and Interwinding Insulations

any Recognized Component Plastic (QMFZ2), polyethylene terephthalate film (PET) 3 mils

Designation	mils(mm)	comments
3M COMPANY [E17385] - Recognized Component		
1 (a)	3[layers]	
1098-1 (b)	3[layers]	
1205	2[layers]	
1298 (b)	3[layers]	
1298CR	3[layers]	
1318-1 (a)	3[layers]	
1318-2 (a)	3[layers]	
1350-1 (b)	3[layers]	
1350-2 (c)	3[layers]	
1350F-1 (b)	3[layers]	
1350F-2 (c)	3[layers]	
1350Y-1 (b)	3[layers]	
1388B-1 (b)	3[layers]	
1388W-1 (b)	3[layers]	
1388Y-1 (b)	3[layers]	
44 (a)	3[layers]	
5	3[layers]	
54 (a)	3[layers]	
56 (a)	3[layers]	
57 (a)	3[layers]	

58 (a)	3[layers]
74 (a)	6[layers]
75	3[layers]
92	2[layers]

ASIA INSULATION MATERIALS INC

DMD

NMN

where QMFZ2 Mylar (PET film) layer is a minimur
 where QMFZ2 Mylar (PET film) layer is a minimur

CHANG SHU LIANG YI TAPE INDUSTRY CO LTD [E246820] - Recognized Component

LY-19-01-15 (c)(d)	3[layers]
LY-19-01-18 (c)(d)	3[layers]
LY-19-01-20 (c)(d)	3[layers]
LY-19-01-25 (c)(d)	3[layers]
LY-19-01-40 (c)(d)	3[layers]
LY-19-01-85 (e)(d)	3[layers]
LY-19-02-15 (c)(d)	3[layers]
LY-19-02-18 (c)(d)	3[layers]
LY-19-02-20 (c)(d)	3[layers]
LY-19-02-25 (c)(d)	3[layers]
LY-19-02-40 (c)(d)	3[layers]
LY-19-02-85 (e)(d)	3[layers]
LY-XX*	3[layers]

DONGGUAN SHIN YAHUA ELECTRONIC MATERIAL CO LTD [E324093] - Recognized Component

CT* (b)(g)	3[layers]
CT* (c)(g)	3[layers]
PF* (d)(g)	2[layers]
PZ* (b)	3[layers]
WF* (c)(h)	3[layers]

DuPont Specialty Products USA, LLC [E34739] - Recognized Component

Nomex® 410	3 (0.08)
Nomex® 411	7 (0.18)
Nomex® 414	3 (0.08)
Nomex® 418, 818, 864LAM	3 (0.08)
Nomex® 993, 993PSB	5 (0.13)
Nomex® E56, 356	4 (0.1)

DUPONT TEIJIN FILMS U S L P [E93687] - Recognized Component

MYLAR Mylar A, AP, EL21, MO21	3 (0.08)
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DWII Advanced Materials Co., Ltd.

AM	3[layers]
AMA	3[layers]
DM	3[layers]
DMD	3[layers]
NM	3[layers]
NMN	3[layers]

where QMFZ2 PET film layer is a min of 3 mils
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E I DUPONT DE NEMOURS & CO INC [E39505] - Recognized Component

Kapton® 100H, 100HN, 100HN-S, 100H-ZT, 100HN-ZT, 100FPC-ZT, 100TAB-ZT, 100PST, 100HA, 100TN, 100V, 100VN, 100FPC, 100FPC-A, 100HPP-ST	2 (0.05)
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E I DUPONT DE NEMOURS & CO INC [E41938] - Recognized Component

Rynite FR530(l)(+)(f1), FR530L(l)(+)(f1)	15 (0.38)
Rynite FR533NH	16 (0.41)
Zytel FR50(+)(f1)	16 (0.41)
Zytel HTNFR52G30LX	16 (0.41)
Zytel HTNFR52G30NH(r6)	15 (0.38)

Jiangsu Wote High Performance Materials Co Ltd [E478701] - Recognized Component

SELCION KB40M, KB40BM, KB40(+)	15 (0.38)
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Jiangsu Yabang New Material Co Ltd [E302236] - Recognized Component

6051	2 (0.05)
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JINGJIANG JINGYANG INSULATING PRODUCT CO LTD [E309872] - Recognized Component

JY-133	3[layers]
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JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD [E246950] - Recognized Component

JY25-A (b)	3[layers]
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JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD [E165111] - Recognized Component

CT* (b)(g)	3[layers]
CT* (c)(g)	3[layers]
PF* (d)(g)	2[layers]
PZ* (b)	3[layers]
WF* (c)(h)	3[layers]

P LEO & CO LTD [E126174] - Recognized Component

1K7170	2[layers]
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SHENZHEN MEIXIN ELECTRONIC CO LTD [E304309] - Recognized Component

MX-466	3[layers]
MX-866	3[layers]

SUMITOMO BAKELITE CO LTD [E41429] - Recognized Component

SUMIKON PM-9630	12 (0.3)
SUMIKON PM-9820, PM-9825	12 (0.3)
SUMIKON PM-9823	12 (0.3)

SUMITOMO CHEMICAL CO LTD [E249884] - Recognized Component

SUMIKASUPER E4008(c4)(c2)(c3)(j)(f2)	17 (0.43)
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SYMBIO INC [E50292] - Recognized Component

35660 (a)	3[layers]
35660Y (e)	3[layers]

35661 (c)	
KA02	2[layers]
KA180	2[layers]
MY9XAF (g)	3[layers]
MY9YAF (h)	3[layers]
<u>TERAOKA SEISAKUSHO CO LTD [E56086] - Recognized Component</u>	
560S #2	2[layers]
560S #3	1[layers]
560S #5	1[layers]
<u>X-FIPER New Material Co., Ltd. [E320646] - Recognized Component</u>	
X-Fiper 316	3 (0.08)
X-Fiper AD30	3 (0.08)
X-Fiper AR30	3 (0.08)
X-Fiper N-756	3 (0.08)
X-Fiper X610	3 (0.08)
X-Fiper X612	3 (0.08)
X-Fiper X630	3 (0.08)
X-Fiper X630H	3 (0.08)
<u>Xinfeng Ghillie Electrical Materials Co Ltd</u>	
DM	3[layers]
DMD	3[layers]
Ghillie AP	3[layers]
Ghillie APA	3[layers]
Ghillie FP	3[layers]
Ghillie FPF	3[layers]
Ghillie MPM	3[layers]
Ghillie PM	3[layers]
Ghillie PMP	3[layers]
NM	3[layers]
NMN	3[layers]
<u>XINFENG GHILLIE ELECTRICAL MATERIALS CO LTD [E326305] - Recognized Component</u>	
JL-B308	3[layers]
JL-D508 (a)	3[layers]
JL-D508C (a)	3[layers]
JL-N408	2[layers]
JL-N418 (b)	2[layers]
JL-P208 (a)	3[layers]
JL-P208 (b)	3[layers]
JL-T4	3[layers]
<u>YANTAI METASTAR SPECIAL PAPER CO LTD [E331406] - Recognized Component</u>	
METASTAR YT564	3 (0.08)

where QMFZ2 PET film layer is a min of 3 mils
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Lead Wires

lead wires are optional for this system

Temp	Insulation
125°C	XLPE - crosslinked polyethylene +
125°C	EPDM - ethylene propylene diene monomer +
150°C	SR - silicone rubber(with or without braid)
150°C	XLPE - crosslinked polyethylene
150°C	PTFE - polytetrafluoroethylene
200°C	SR - silicone rubber(with or without braid)
200°C	PTFE - polytetrafluoroethylene
200°C	PFA - Perfluoroalkoxy

+ 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 excluded 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
<u>E. I. DuPont de Nemours & Co.</u>	
Nomex® Board	
<u>Hejian City Jincheng Electrical Materials Co Ltd</u>	
HJC-GP03	
<u>X-FIPER New Material Co., Ltd.</u>	
Aramid board	
<u>YANTAI METASTAR SPECIAL PAPER CO LTD [E331406] - employing Recognized materials</u>	
METASTAR YT511	
METASTAR YT516, YT510	
METASTAR YT56	

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
<u>3M COMPANY [E17385] - Listed or Recognized Component</u>	
1 (a)	
1098-1 (b)	
1205	
1298 (b)	
1298CR	
1318 clear (a)	
1318-1 (a)	
1318-2 (a)	

[1350-1 \(b\)](#)
[1350-2 \(c\)](#)
[1350CR-1](#)
[1350CR-2](#)
[1350F-1 \(b\)](#)
[1350F-2 \(c\)](#)
[1350FW-1 \(b\)](#)
[1350FW-2 \(c\)](#)
[1350T-1 \(b\)](#)
[1350T-2 \(b\)](#)
[1350T-3 \(b\)](#)
[27 \(a\)](#)
[44 \(a\)](#)
[44-T \(a\)](#)
[44D \(a\)](#)
[44D-A \(a\)](#)
[44T-A \(a\)](#)
[55](#)
[56 \(a\)](#)
[69 \(a\)](#)
[79](#)
[92](#)
[Super 10 \(a\)](#)
[Super 20 \(a\)](#)

[CHANGSHU FUBANG ADHESIVE TAPE LTD CO \[E248834\] - Listed or Recognized Component](#)

[FK-01%](#)

[FK-02](#)

[JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD \[E246950\] - Listed or Recognized Component](#)

[J16](#)

[J18](#)

[WF310 \(a\)](#)

[JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD \[E165111\] - Listed or Recognized Component](#)

[CT* \(b\)\(g\)](#)

[CT* \(c\)\(g\)](#)

[CT-280B](#)

[CT-285B](#)

[PF* \(d\)\(g\)](#)

[PZ* \(b\)](#)

[WF* \(c\)\(h\)](#)

[Nitto Inc \[E20392\] - Listed or Recognized Component](#)

[P-221](#)

[P LEO & CO LTD \[E126174\] - Listed or Recognized Component](#)

[1K7171A](#)

[SHENZHEN MEIXIN ELECTRONIC CO LTD \[E304309\] - Listed or Recognized Component](#)

[MX-466-00](#)

[MXPI-310](#)

[MXPI-310F.310.312](#)

[SHENZHEN MEIXIN ELECTRONICS CO LTD](#)

[MXCU-110](#)

[MXCU-210](#)

[MXPI-610](#)

[MXPI-710](#)

[Sui On Insulating Materials Co. Ltd.](#)

[No. 14010](#)

[Soflex Tape 13130](#)

[SYMBIO INC \[E50292\] - Listed or Recognized Component](#)

[35660 \(a\)](#)

[35660Y \(e\)](#)

[35661 \(c\)](#)

[35661-2 \(h\)](#)

[35661-3 \(h\)](#)

[GL08](#)

[KA00](#)

[KA02](#)

[KA180](#)

[KA180E](#)

[KA180H](#)

[KA180HA](#)

[KA180K](#)

[KA180L](#)

[KA200](#)

[MY9XAF \(g\)](#)

[MY9YAF \(h\)](#)

[Wujiang Venture Tape Co Ltd \[E497571\] - Listed or Recognized Component](#)

1697 *** this product is no longer Recognized ***

[XINFENG GHILLIE ELECTRICAL MATERIALS CO LTD \[E326305\] - Listed or Recognized Component](#)

[JL-B308](#)

[Xinfeng Ghillie Electrical Materials Co., Ltd](#)

[JL-A708](#)

[JL-H808](#)

[JL-M608](#)

Core tubes and Bobbins

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

Designation	comments
<u>ASCEND PERFORMANCE MATERIALS, LLC [E70062] - employing Recognized materials</u> VYDYNE 909 VYDYNE R530	
<u>BASF CORP [E36632] - employing Recognized materials</u> Ultramid A3X2G5	
<u>CHANG CHUN PLASTICS CO LTD [E59481] - employing Recognized materials</u> LONGLITE T375HF T200HF	
<u>SAMYANG CORPORATION [E116425] - employing Recognized materials</u> TRIPET 2550GN30	
<u>SHINKONG SYNTHETIC FIBERS CORP [E107536] - employing Recognized materials</u> E202G30 F202G30	
<u>SUMITOMO BAKELITE CO LTD [E41429] - employing Recognized materials</u> SUMIKON PM-9750	

Spacer and Wedges

spacer and wedges are optional for this system

Designation	comments
<u>HANGZHOU LIANSHENG INSULATION CO LTD</u> LS1130	
<u>Kingboard Laminates Holdings Ltd</u> HF-140 KB-3152 KB-6150C KB-6160C	
<u>Kunshan Weihao</u> FR-4 GPO-3 T-3240	
<u>Rochling Glastic Composites</u> GP03 Polyester SG-200	

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 [E180908] - Recognized Component</u> CB-HFT, CB-HFT(XY), CYG-MT CB-TT-L CB-TT-S CB-TT-T CYG-KYNAR CYG-ZHP	
<u>E&B TECHNOLOGY CO LTD [E469946] - Recognized Component</u> E&B-XXXX	
<u>HUAPENG (SUZHOU) HEAT-SHRINKABLE MATERIALS CO LTD [E324238] - Recognized Component</u> H-FSG H-SFG H-SFS H-SFT	
<u>NIKKAN INDUSTRIES CO LTD [E55258] - Recognized Component</u> S-693F-1 S-693V F-1	
<u>NIKKAN INDUSTRIES CO LTD [E72406] - Recognized Component</u> S-693-600	
<u>NIKKAN INDUSTRIES CO LTD [E88468] - Recognized Component</u> E-651U-1 E-651U-2	
<u>SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD [E203950] - Recognized Component</u> RSFR-H WF	

Tie Cords

Designation	comments
<u>Asia Insulation Materials Inc</u> AGF AGPF APF ART	
<u>Various Manufacturers</u> Uncoated fiberglass	

Potting Compounds

potting compounds are optional for this system

Designation	comments
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Dong Guan Etto Electric Material Co., Ltd.

3300

E-500 (XX)

Epoxy Potting Compound

Epoxy Molding Compound

DONG GUAN SHI PAI HUA CHUANG MATERIAL FTY [E304477] - employing Recognized materials**808A/B-H****H907-H##**Dongguan City Heng erlang Industrial Co Ltd [E475498] - employing Recognized materials**EP3189H/S**DONGGUAN CITY HENG ERLANG INDUSTRIAL CO LTD

EP3189

G657-3

SUZHOU POCHLEY ELECTRONIC MATERIAL CO LTD

8757

HB-5225A/B

Varnishes

varnishes are optional for this system

Designation

comments

ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC [E75225] - Recognized Component**1000 Water Borne, 1000-50, 1000-70, 1000-70B, 1000-70-xx, 1000 Low VOC, ELAN-safe****210U01-50, ELAN-safe 210U01-75, 1000-25, 1000-70 Mod. II at 25% NVM****50 (e), 50S (e), 50SM (e), 50VT (e), 50VTC (e)&, 5180 (e), 5183 (e)&, 5183SW&, 5180 VT****(e)&, ELAN-Dur 822A01&, CORONA-Protect 828A01&****V1380, V1380FC, V1380FC Black, 80381FC****V1630, V1630FS, V1630FS50, V1630FS Black, 80361, 80361FS**ELANTAS ZHUHAI CO LTD [E314793] - Recognized Component**1000 Water Borne, 1000-50, 1000-70, 1000-70B, 1000 Low VOC, ELAN-safe 210U01-50,****ELAN-safe 210U01-75****50 (e), 50S (e), 50SM (e), 50VT (e), 50VTC (e), 5180 (e), 5183 (e), 5183SW, ELAN-Dur****822A01, CORONA-Protect 828A01****V1380, V1380FC, V1380FC Black, 80381FC****V1630FS, V1630, 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****BC-356, BC-359, PDR-1695, BB-359FR, BB-359MS, BC-359/569-D**KYOCERA Corporation [E83702] - Recognized Component**TVB2180T*(a)**YUEYANG GREEN TECHNOLOGY CO LTD [E303754] - Recognized Component**JX-1150***

Miscellaneous Minor Insulations

miscellaneous minor insulations are optional for this system

Designation

comments

TECHIG CIRCUIT TECHNOLOGY(HUIZHOU) CO LTD

T-PCB (MF2)

VICTORY GIANT TECHNOLOGY (HUIZHOU) CO LTD

SH10