

Furukawa Electric's UL1446 Insulation System [FIS-B1] Components List

Major component (Page 1)

Magnet Wire

: ANSI Wire MW-28, 75, 79, 80, 82, 83

Triple Insulated Winding Wire

Furukawa Electric

: TEX-E, TEX-ECEW3, TEX-ELZ

Insulation Material

Sumitomo Bakelite

: PM-9630 (0.3mm), PM-9820 (0.3mm)

Du Pont

: FR530(0.3mm), FR530L(0.3mm), Zenite
6130(0.3mm)

Hitachi Chemical

: CP8800(0.39mm), CP8600(0.39mm)
: UL recognized polyethylene Terephthalate film
(0.050mm)
UL recognized polyimide film(0.050mm)

Insulating Adhesive Tape

Note: In your design, adopting the following tapes as Basic, supplementary or reinforced insulation, the total insulation thickness of backing films must be thicker than 0.050mm.

Teraoka Seisakusho :

No.631S, No.632S

3M :

No.1, No.5, No.54, No. 55, No.56, No.57, No.58, No.74, No.75, No. 92 No.1205,
No.1298, No.1298CR, No.1318-1, No.1318-2, No.Super10, No. Super 20,
No.1350-1, No.1350-2, No.1350F-1, No.1350F-2, No.1350CR-1, No.1350CR-2,
No.1350T-1, No.1350T-2, No.1350T-3, No.1351T-1, No.1351T-2, No.1351T-3, No.
44, No.44T, No.44D, No.44T-A, No.44D-A, No.1351-1, No.1351-2, No.MR-94,
No.MR-94B

P.Leo :

1P801, 1P802, 1P9FR, 1P130, 1P133, 1P135, 1P350, 1P656, 1P700, 1P756,
1P808, 1P830, 1P833, 1K063, 1K7170, 1K7171, 1K7172, 1N155, 1H860, 1N012

Intertape Polymer :

461FR,4426-00,4426-04,4560-00,4560-04,4564-00,4570-00,4570-04,4616-00,461
6-04,51560-08,51560-17 ,51562-08,51562-17,51578-00,51580-00,51580-04,5158
7-04,51587-17,51588-00,51589-00,51589-04,51589-17,51592-00,51592-08,51592
-17,51594-17,51596-00,51596-04,51599-00,54107-17,54108-08,54113,54113-17,
54143-00,54143-17

Major component (Page 2)

Insulating Adhesive Tape

Note: In your design, adopting the following tapes as Basic, supplementary or reinforced insulation, the total insulation thickness of backing films must be thicker than 0.050mm.

Nitto Denko:

No. 31C, No. 31C-UL, No.31CT, No.31CT-1, No.31CT-2, No.31B-N, No.31B-UL,
No.343B

Sumitomo 3M : No.Super10-W, No.Super10-T

Four Pillars : 35660, 35660Y, 35661

Jingjiang Pressure : CT, PZ, WF

Hyun Dai : No.800, No.800BT

Duck Sung : DTS-204, DTS-241, DTS-280

Bondtec Pacifi : No.371F, No.370S, No.201

Nichiban : No.945UL-30, No.945UL-50

Tae Hwa : No.H5673

KMP Chemical : No.MP4674-B

Minor component (Page 1)

Insulating Material

| | |
|------------------------------|---|
| <i>Sumitomo Bakelite</i> | : PM-9630, PM-9850, PM-9820, PM-9750 |
| <i>Hitachi Chemical</i> | : CP8800, CP8600 |
| <i>Du Pont</i> | : NOMEX 410, 414, 416, 418, 424, 425, 411, 992, 993, 994 KAPTON H, V, HN, VN or HA, Mylar FR530, FR530L, Zenite 6130, SK665FR |
| <i>Various Manufacturers</i> | : UL Recognized Polyethylene Terephthalate film |
| <i>Kolon</i> | : KP212V0 |
| <i>Chang Chun</i> | : PBT-4130 |
| <i>Toray</i> | : 1494 |
| <i>Furukawa Electric</i> | : TEX-E, TEX-ECEW3, TEX-ELZ, TEX-B |

Insulating Adhesive Tape

Teraoka Seisakusho :

No.630F#25, No.630F#50, No.631S#25, No.631S#38, No.631S#50,
No.632S#25, No.632S#50, No.650S#25, No.650S#50, No.652S#25, No.653F#25,
No.654S#25, No.560S#2, No.560S#3, No.560S#5, No.561S#2, No.561S#3,
No.561S#7, No.635F, No.636F, No.530F, No.673A, No.673F

3M :

No.1, No.5, No.44, No.54, No.55, No.56, No.57, No.58, No.74, No.75, No.92,
No.1205, No.1298, No.1298CR, No.1318-1, No.1318-2, No.Super10,
No.Super20, No.1350-1, No.1350-2, No.1350F-1, No.1350F-2, No.1350CR-1,
No.1350CR-2, No.1350T-1, No.1350T-2, No.1350T-3, No.1351T-1,
No.1351T-2, No.1351T-3, No.44T, No.44D, No.44T-A, No.44D-A, No.MR-94,
No.MR94-B, No.1351-1, No.1351-2

Intertape Polymer :

461FR,4426-00,4426-04,4560-00,4560-04,4564,4570-00,4570-04,4616-00,4616-0
4,51560-08,51560-17 ,51562-08,51562-17,51578-00,51580-00,51580-04,51587-0
4,51587-17,51588-00,51589-00,51589-04,51589-17,51592-00,51592-08,51592-17
,51594,51596-00,51596-04,51599-00,54107,54108,54113,54113-17,54143,54143-
17

P.Leo :

1H818, 1PN2R, 1G130, 1A025, 1PN820, 1TF05, 1P801, 1P802, 1P9FR, 1P130,
1P133, 1P135, 1P350, 1P656, 1P700, 1P756, 1P808, 1P830, 1P833, 1K063,
1K7170, 1K7171, 1K7172, 1N008, 1N155, 1H860, 1N012, 1H86A, 1H86R, 1H850,
1PEN2, 1PEN3, 1PN3R, 1PENS, 1G006, 1G155, 1G180, 1G200, 1A570, 1A605,
1C822, 1PN828, 1TF07

Hyun Dai : No.800, No.800BT

Tae Hwa Industries : H5673

KMP Chemical : MP4674B

Sumitomo 3M : No.Super10-W, No.Super10-T

Nitto Denko : No.31C, No.31CT, No.343BN

Bondtec Pacific : 371F, 370S, 201

Four Pillars : 35660, 35660Y, 35661

Jingjiang Pressure : PZ, CT, WF

Duck Sung : DTS-204, DTS-241, DTS-280

Nichiban : No.945UL-30, No.945UL-50

Minor component (Page 2)

Copper Foil Adhesive Tape

Teraoka Seisakusho : No.831S
Sumitomo 3M : No.CU-35, No.2245
P. Leo : 1E075
Tae Hwa Industries : A-3338, E-3338

Tube

Nissei Electric : No.RSU-1, No.RSU-2
Furukawa Electric : PI-Tube
Sumitomo Electric : Sumitube F2(Z)
Hitachi Cable : Versafit V2
Kurabe : SE-1, SE-2
Nikkan : E651U-1, E651U-2, S-693-F1, S-693-600
Daikin Industries : EP520
LG Cable : GSHS-1625
GreatHolding : TFL, TFT, TFS
Zeus : TFE-LW-150, TFE-TW-300, TFE-SW-600
Cosmo Link : PTFE L-type, PTFE T-type
P.Leo : 2T-TFT, 2T-TFL, 2T-TFS, 2R-SG

Potting Compounds

GE Toshiba Silicones : TSE3331, TSE3331K

Tie Cord

Various Manufacturers : Untreated Fiberglass

Spacers and Wedges

Any material in this list with no thickness restriction

Lead Wire

Silicone rubber with or without fiberglass braid, 150C or 200C

GTFE extruded Tefzel rated 150C

Polytetrafluoroethylene or Teflon or TFE extruded, rated 200C

Varnish

Viking :V1380,V1380FC, V1380FC Black,
V1630, V1630FS, V1630FS50
Dolph :BC-346A, BC-346B, BC-346AN, BB-346E, BB-353,
BB-346HF, BG-346A, PDR-1839
Kyocera Chemical :TVB-2180T
Hitachi Chemical :WP-2952F-2G