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REPORT

ON

COMPONENT - APPLIANCE WIRING MATERIAL
CANADIAN AWM

**Applicant: Qifurui Electronics Co
Duarte, Ca**

**Recognized Company: 3F Electronics Industry Corp File E305786
Shenzhen Guangdong China**

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DESCRIPTION NO. 1

PRODUCT COVERED:

CNL: Appliance Wire, XLPE Insulated Singles, Class I, Group A.

ENGINEERING CONSIDERATIONS: (Not for Field Representative's Use)

CNL indicates investigation to Canadian Standard C22.2 No. 210.2. This product shall be constructed in accordance with the Canadian Standard for Appliance Wiring Material, C22.2 No. 210.2, and as described below:

CONSTRUCTION DETAILS:

Construction - This is a single conductor with extruded XLPE insulation.

Use Class - I (internal use).

Group - A (Not subject to mechanical abuse).

Voltage Rating - 30, 150, 300 or 600 Volts.

Temperature Rating - 60, 80, 90, 105, 125 or 150°C.

Flame Rating - FT2

Conductor - Solid or stranded, in accordance with the Standard.

Covering - Optional, in accordance with the Standard

Insulation - Class No. 16 XLPE with thicknesses in accordance with the table below:

Table I

Material: XLPE, Class 16
Temperature Rating: 150°C
Use Class: I (Internal)
Group: A

Conduct or Size	Minimum Average Thickness, Mils				Minimum Thickness at any Point, Mils			
	30	150V	300V	600V	30	150	300	600V
	V				V	V	V	
30-9 AWG	5	10	15	30	4	8	13	27
8 - 4 AWG	--	--	--	--	--	--	--	--
2 AWG	--	--	--	--	--	--	--	--
1 - 4/0 AWG	--	--	--	--	--	--	--	--

Marking - In accordance with the Section General and the standard with the following additions/modifications:

AWM I A # C # V FT2

NOTE - Applicable temperature, Voltage, and flame ratings.

DESCRIPTION NO. 2

PRODUCT COVERED:

CNL: Appliance Wire, FEP Insulated Singles, Class I, Group A.

ENGINEERING CONSIDERATIONS: (Not for Field Representative's Use)

CNL indicates investigation to Canadian Standard C22.2 No. 210.2. This product shall be constructed in accordance with the Canadian Standard for Appliance Wiring Material, C22.2 No. 210.2, and as described below:

CONSTRUCTION DETAILS:

Construction - This is a single conductor with extruded FEP insulation.

Use Class - I (internal use)

Group - A (Not subject to mechanical abuse)

Voltage Rating - 30, 150, 300 or 600 Volts.

Temperature Rating - 60, 80, 90, 105, 150, or 200°C.

Flame Rating - FT1, FT2.

Conductor - Solid or stranded, in accordance with the Standard.

Covering - (Optional), In accordance with the Standard.

Insulation - Class No. 25, FEP with thicknesses in accordance with the table below:

Table I

Material: FEP, Class 25

Temperature Rating: 60, 80, 90, 105, 150, or 200°C

Use Class: I (Internal)

Group: A

Conductor Size	Minimum Average Thickness, Mils				Minimum Thickness at any point, Mils			
	30 V	150 V	300 V	600 V	30 V	150 V	300 V	600 V
50 - 33 AWG	13	13	13	20	12	12	12	18
32 - 9 AWG	13	13	13	20	12	12	12	18

Marking - In accordance with the Section General and the standard.

DESCRIPTION NO. 3

PRODUCT COVERED:

CNR: Appliance Wire, Extruded PVC, Insulated Singles, Class I,
Group A.

TECHNICAL CONSIDERATIONS (NOT FOR **UL** REPRESENTATIVE'S USE):

CNR indicates investigation to Canadian Standard C22.2, No. 210.2.
This product shall be constructed in accordance with the Canadian Standard
for Appliance Wiring Material Products, C22.2, No. 210.2, and as described
below:

CONSTRUCTION DETAILS:

Construction - This is an insulated single with extruded PVC insulation.

Use Class - I (Internal use)

Group - A (Not subject to mechanical abuse)

* Voltage Rating - 30, 150, 300, 600 **or 1000** V.

Temperature Rating - 60, 80, 90 or 105°C.

Flame Rating - FT1 and/or FT2. FT-1 Flame Rating not authorized if
nylon covering is provided.

Conductor - Solid or stranded, in accordance with the Standard.

*

Insulation - Material Class No. 21, PVC with thickness in accordance with the Tables below:

Table: 1

Material: PVC
 Temperature Rating: 60, 80, 90 or 105°C
 Use Class: I (Internal)
 Group: A

Conductor Size	Minimum Average Thickness, mils					Minimum Thickness At Any Point, mils				
	30 V	150 V	300 V	600 V	1000 V	30 V	150 V	300 V	600 V	1000 V
44 - 10 AWG	15	15	15	30	-	13	13	13	27	-

Table: 2

Material: PVC
 Temperature Rating: 60, 80 or 90°C
 Use Class: I (Internal)
 Group: A

Conductor Size	Minimum Average Thickness, mils					Minimum Thickness At Any Point, mils				
	30 V	150 V	300 V	600 V	1000 V	30 V	150 V	300 V	600 V	1000 V
44 - 10 AWG	15	15	15	28	28	13	13	13	25	25

Covering - Optional. If provided, nylon, 4 mils minimum average thickness, 3 mils minimum thickness at any point.

Marking - In accordance with the Section General and the Standard.

When nylon covering is provided, markings should be printed on PVC insulation and can be readily legible through the nylon covering.

DESCRIPTION NO. 4

PRODUCT COVERED:

CNL: Appliance Wire, PVC Insulated Parallel Cable, Class I, Group A.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

CNL indicates investigation to Canadian Standard C22.2 No. 210.2. This product shall be constructed in accordance with the Canadian Standard for Appliance Wiring Material, C22.2 No. 210.2, and as described below:

CONSTRUCTION DETAILS:

Construction - This is a parallel cable with extruded PVC insulation.

Use Class - I (internal use)

Group - A (Not subject to mechanical abuse)

Voltage Rating - 30, 150 or 300 Volts.

Temperature Rating - 60 and 80°C.

Flame Rating - FT1, FT2

Conductor - Solid or stranded, in accordance with the Standard.

Insulation - Class No. 21 PVC with thicknesses in accordance with the table below:

Table I

Material: PVC, Class 21

Temperature Rating: 60 or 80°C

Use Class: I (Internal)

Group: A

Conductor Size	Minimum Average Thickness, Mils				Minimum Thickness at any point, Mils			
	30 V	150 V	300 V	600 V	30 V	150 V	300 V	600 V
32-16 AWG	15	15	15	--	13	13	13	--

Marking - In accordance with the Section General and the standard with the following additions/modifications:

AWM I A # C # V FT#

NOTE - Applicable temperature, voltage, and flame ratings.

DESCRIPTION NO. 5PRODUCT COVERED:

CNL: Appliance Wire, Silicone Rubber Insulated Singles, Class I, Group A.

ENGINEERING CONSIDERATIONS: (Not for Field Representative's Use)

CNL indicates investigation to Canadian Standard C22.2 No. 233.2. This product shall be constructed in accordance with the Canadian Standard for Appliance Wiring Material, C22.2 No. 233.2, and as described below.

CONSTRUCTION DETAILS:

Construction - This is a single conductor with extruded Silicone Rubber insulation.

Use Class - I (internal use)

Group - A (Not subject to mechanical abuse)

Maximum Voltage Rating - 30, 150, 300, or 600 Volts.

MaximumTemperature Rating - 60, 80, 90, 105, 125, 150 or 200°C.

Maximum Flame Rating - FT2

Conductor - Solid or stranded of nickel or copper. All copper shall be tin, nickel or silver coated in accordance with the Standard.

Insulation - Material Class No. 8, Silicone Rubber with thicknesses in accordance with the table below:

Table 1

:
Material Silicone Rubber,
: Class 8
Temperature 200°C
Rating:
Use Class: I (Internal)
Group: A

Conductor Size	Minimum Average Thickness, Mils				Minimum Thickness at any point, Mils			
	<u>30 V</u>	<u>150</u> <u>V</u>	<u>300</u> <u>V</u>	<u>600</u> <u>V</u>	<u>30 V</u>	<u>150 V</u>	<u>300 V</u>	<u>600 V</u>
30 - 9 AWG	30	30	30	30	27	27	27	27
8 - 4 AWG	45	45	45	45	40	40	40	40
2 AWG	60	60	60	60	54	54	54	54
1 - 4/0 AWG	80	80	80	80	72	72	72	72

Marking - In accordance with the Section General and the standard.

DESCRIPTION NO. 6

PRODUCT COVERED:

CNR: Appliance Wire, Extruded XLPVC, Insulated Singles, Class I, Group A.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

CNR indicates investigation to Canadian Standard C22.2, No. 210.2. This product shall be constructed in accordance with the Canadian Standard for Appliance Wiring Material Products, C22.2, No. 210.2, and as described below:

CONSTRUCTION DETAILS:

Construction - This is an insulated single with extruded ^ insulation.

Use Class - I (internal use)

For further processing as insulated singles in jacketed cable.

Group - A (Not subject to mechanical abuse)

Voltage Rating - 30, 150, 300 or 600 V.

Temperature Rating - 60, 80, 90 or 105°C.

Flame Rating - FT1 and/or FT2.

Conductor - Solid or stranded, in accordance with the Standard.

Insulation - Material Class No. 14, XLPVC with thickness in accordance with the Table below:

Table: 1

Material: XLPVC
 Temperature Rating: 60, 80, 90 or 105°C
 Use Class: I (Internal)
 For further processing as insulated singles in jacketed cable.
 Group: A, B, or A/B

Conductor Size	Minimum Average Thickness, mils					Minimum Thickness At Any Point, mils				
	<u>30 V</u>	<u>150 V</u>	<u>300 V</u>	<u>600 V</u>	<u>1000 V</u>	<u>30 V</u>	<u>150 V</u>	<u>300 V</u>	<u>600 V</u>	<u>1000 V</u>
44 - 10 AWG	17	17	17	17	-	15	15	15	15	-

Marking - In accordance with the Section General and the Standard.

DESCRIPTION NO. 7

PRODUCT COVERED:

CNR: Appliance Wire, Extruded SRPVC, Insulated Singles, Class I, Group A, B or A/B.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

CNR indicates investigation to Canadian Standard C22.2, No. 210.2. This product shall be constructed in accordance with the Canadian Standard for Appliance Wiring Material Products, C22.2, No. 210.2, and as described below:

CONSTRUCTION DETAILS:

Construction - This is an insulated single with extruded SRPVC insulation.

Use Class - I (internal use)

Group - A (Not subject to mechanical abuse)
B (May be subject to mechanical abuse)

Voltage Rating - 30, 150 or 300 V.

Temperature Rating - 60 or 80°C.

Flame Rating - FT1 and/or FT2.

Conductor - Solid or stranded, in accordance with the Standard.

Insulation - Material Class No. 24, SRPVC with thickness in accordance with the Table below:

Table: 1

Material: SRPVC
 Temperature Rating: 60 or 80°C
 Use Class: I (Internal)
 Group: A, B, or A/B

Conductor Size	Minimum Average Thickness, mils					Minimum Thickness At Any Point, mils				
	<u>30 V</u>	<u>150 V</u>	<u>300 V</u>	<u>600 V</u>	<u>1000 V</u>	<u>30 V</u>	<u>150 V</u>	<u>300 V</u>	<u>600 V</u>	<u>1000 V</u>
44 - 10 AWG	9	9	9	--	--	7	7	7	--	--

Marking - In accordance with the Section General and the Standard.

DESCRIPTION NO. 8

PRODUCT COVERED:

CNR - Appliance Wire, Multiconductor with non-integral PVC jacket, Class I, Class II, or Class I/II, Group A, B, or A/B.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

CNR indicates investigation to Canadian Standard C22.2 No. 210.2. This product shall be constructed in accordance with the Canadian Standard for Appliance Wiring Material, C22.2 No. 210.2, and as described below.

CONSTRUCTION DETAILS:

Marking - In accordance with the Section General and the Standard.

Construction - This is a multiconductor cable with extruded PVC non-integral jacket.

Use Class - I (internal use)
II (external use)

Group - A (Not subject to mechanical abuse)
B (May be subject to mechanical abuse)

Voltage Rating - 30, 150, 300 or 600 Volts.

Temperature Rating - 60, 80, 90 or 105°C.

Flame Rating - FT1, FT2.

Jacket - Material Class No. 5, PVC with thickness in accordance with the table(s) below:

Table 1
Thickness of Jacket

Material:	PVC
Temperature Rating:	80°C
Use Class:	I (Internal)
Group:	A, B, or A/B

Thickness			
Minimum average		Minimum at any point	
in.	(mm)	in.	(mm)
0.015	1.02	0.013	0.86

Table 2
Thickness of Jacket

Material: PVC Class 5
 Temperature Rating: 105°C
 Use Class: I (Internal)
 II (External)
 I/II (Internal/External)
 Group: A, B, or A/B

Measured diameter# Under jacket				Thickness			
Over		Up to		Minimum average		Minimum at any point	
in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
0	(0)	0.250	(6.35)	0.015	(0.38)	0.012	(0.30)
0.251	(6.36)	0.500	(12.7)	0.030	(0.76)	0.024	(0.60)
0.501	(12.71)	0.700	(17.8)	0.050	(1.27)	0.040	(1.01)
0.701	(17.81)	1.500	(38.1)	0.080	(2.03)	0.064	(1.62)
1.501	(38.11)	2.500	(63.5)	0.110	(2.79)	0.088	(2.23)
2.501	(63.51)	3.500	(88.9)	0.140	(3.55)	0.112	(2.84)
3.501	(88.91)	and larger		0.160	(4.06)	0.128	(3.25)

- For parallel constructions, use the measured minor core dimension under the jacket to determine the jacket thickness required