KTC

Quality Endorsed Company
ISO9001/QEC 20268
Standards Australia

CERTIFICATE OF COMPLIANCE

DEC. 05, 2010

1. REPORT NO. : KTC/QA 2010E - 0927
2. PURCHASER : RHONA-CHILE
3. P O NO. : -
4. MANUFACTURER : KTC CO., LTD.
5. NAME OF GOODS : PVC/NYLON/ASV/FR-PVC
6. REFERENCE SPEC. : KTC-93035-0201

We hereby certify that below stated articles and quantities manufactured by KTC plant have been complied with technical requirement as per specification.

※ The detailed articles and quantities are attached hereto.

H. P. Kim

Hwan Pil Kim / Manager
Quality Assurance Sect.
K T C Plant

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THE ARTICLE & QUANTITY

PKG. NO.	CABLE TYPE	CABLE SIZE	QUANTITY (m X Drum)	REMARK
	PVC/NYLON/ASV /FR-PVC	18AWG × 1P 18AWG × 2P 18AWG × 3P 18AWG × 4P 18AWG × 1T ↓	1,000 X 1 1,000 X 1 1,000 X 1 1,000 X 1 1,000 X 1	

TOTAL : 5,000m (5 DRUMS)

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TEST REPORT

CABLE TYPE : PVC/NYLON/ASV/FR-PVC

CABLE SIZE		18AWG × 1P	
TEST ITEM	UNIT	SPEC. VALUE	TEST RESULT
1. TOTAL LENGTH	m	1,000	1,000
2. APPEARANCE	-	SHALL BE GOOD	GOOD
3. CONSTRUCTION TEST			
3.1 CONDUCTOR			
a. CONSTRUCTION	EA/mm	7/0.386	7/0.386
b. OUTER DIA. (APPROX.)	mm	1.16	1.16
3.2 INSULATION			
a. MATERIAL	-	PVC	PVC
b. AVE. THICKNESS	mm	MIN. 0.38	0.43
c. MIN. THICKNESS	mm	MIN. 0.33	0.39
d. COLOR	-	AS PER SPEC.	GOOD
3.3 LAYING UP			
a. PAIR IDENTIFICATION	-	Black , Red	GOOD
b. NO. OF PAIR	EA	1	1
3.4 NYLON JACKET			
a. MATERIAL	-	NYLON	NYLON
b. MIN. THICKNESS	mm	MIN. 0.1	0.12
3.5 SHIELD			
a. ALMYLR TAPE	-	-	0.025(t)×20(w)
b. DRAIN WIRE	㎟	0.5	0.5
3.6 OUTER SHEATH			
a. MATERIAL	-	FR-PVC	FR-PVC
b. AVE. THICKNESS	mm	MIN. 1.14	MIN. 1.24
c. MIN. THICKNESS	mm	MIN. 0.91	MIN. 1.20
3.5 APPROX. OVERALL DIA..	mm	APPROX. 7.0	7.1
4. CABLE MARKING	-	AS PER SPEC.	
5. ELECTRICAL TEST			
5.1 CONDUCTOR RES. AT 20℃	Ω/Km	MAX. 22.3	22.101
5.2 INSULATION RES. AT 20℃	MΩ.Km	MIN. 0.762	12,500

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TEST REPORT

CABLE TYPE : PVC/NYLON/ASV/FR-PVC

CABLE SIZE		18AWG × 2P	
TEST ITEM	UNIT	SPEC. VALUE	TEST RESULT
1. TOTAL LENGTH	m	1,000	1,000
2. APPEARANCE	-	SHALL BE GOOD	GOOD
3. CONSTRUCTION TEST			
3.1 CONDUCTOR			
a. CONSTRUCTION	EA/mm	7/0.386	7/0.386
b. OUTER DIA. (APPROX.)	mm	1.16	1.16
3.2 INSULATION			
a. MATERIAL	-	PVC	PVC
b. AVE. THICKNESS	mm	MIN. 0.38	0.41
c. MIN. THICKNESS	mm	MIN. 0.33	0.35
d. COLOR	-	AS PER SPEC.	GOOD
3.3 LAYING UP			
a. PAIR IDENTIFICATION	-	Black , Red	GOOD
b. NO. OF PAIR	EA	2	2
3.4 NYLON JACKET			
a. MATERIAL	-	NYLON	NYLON
b. MIN. THICKNESS	mm	MIN. 0.1	0.13
3.5 SHIELD			
a. ALMYLR TAPE	-	-	0.025(t)×20(w)
b. DRAIN WIRE	mm²	0.5	0.5
3.6 OUTER SHEATH			
a. MATERIAL	-	FR-PVC	FR-PVC
b. AVE. THICKNESS	mm	MIN. 1.14	MIN. 1.28
c. MIN. THICKNESS	mm	MIN. 0.91	MIN. 1.24
3.5 APPROX. OVERALL DIA..	mm	APPROX. 10.0	10.3
4. CABLE MARKING	-	AS PER SPEC.	
5. ELECTRICAL TEST			
5.1 CONDUCTOR RES. AT 20℃	Ω/Km	MAX. 22.3	22.153
5.2 INSULATION RES. AT 20℃	MΩ.Km	MIN. 0.762	1,500

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TEST REPORT

CABLE TYPE : PVC/NYLON/ASV/FR-PVC

CABLE SIZE		18AWG × 3P	
TEST ITEM	UNIT	SPEC. VALUE	TEST RESULT
1. TOTAL LENGTH	m	1,000	1,000
2. APPEARANCE	-	SHALL BE GOOD	GOOD
3. CONSTRUCTION TEST			
3.1 CONDUCTOR			
a. CONSTRUCTION	EA/mm	7/0.386	7/0.386
b. OUTER DIA. (APPROX.)	mm	1.16	1.16
3.2 INSULATION			
a. MATERIAL	-	PVC	PVC
b. AVE. THICKNESS	mm	MIN. 0.38	0.42
c. MIN. THICKNESS	mm	MIN. 0.33	0.40
d. COLOR	-	AS PER SPEC.	GOOD
3.3 LAYING UP			
a. PAIR IDENTIFICATION	-	Black , Red	GOOD
b. NO. OF PAIR	EA	3	3
3.4 NYLON JACKET			
a. MATERIAL	-	NYLON	NYLON
b. MIN. THICKNESS	mm	MIN. 0.1	0.12
3.5 SHIELD			
a. I.S ALMYLR TAPE	-	-	0.025(t)×15(w)
b. I.S DRAIN WIRE	mm^2	0.5	0.5
c. O.S ALMYLR TAPE	-	-	0.025(t)×20(w)
d. O.S DRAIN WIRE	mm^2	0.5	0.5
3.6 OUTER SHEATH			
a. MATERIAL	-	FR-PVC	FR-PVC
b. AVE. THICKNESS	mm	MIN. 1.14	MIN. 1.27
c. MIN. THICKNESS	mm	MIN. 0.91	MIN. 1.23
3.5 APPROX. OVERALL DIA..	mm	APPROX. 13.5	13.4
4. CABLE MARKING	-	AS PER SPEC.	
5. ELECTRICAL TEST			
5.1 CONDUCTOR RES. AT 20℃	Ω/Km	MAX. 22.8	22.419
5.2 INSULATION RES. AT 20℃	MΩ.Km	MIN. 0.762	1,500

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TEST REPORT

CABLE TYPE : PVC/NYLON/ASV/FR-PVC

CABLE SIZE		18AWG × 4P	
TEST ITEM	UNIT	SPEC. VALUE	TEST RESULT
1. TOTAL LENGTH	m	1,000	1,000
2. APPEARANCE	-	SHALL BE GOOD	GOOD
3. CONSTRUCTION TEST			
3.1 CONDUCTOR			
a. CONSTRUCTION	EA/mm	7/0.386	7/0.386
b. OUTER DIA. (APPROX.)	mm	1.16	1.16
3.2 INSULATION			
a. MATERIAL	-	PVC	PVC
b. AVE. THICKNESS	mm	MIN. 0.38	0.41
c. MIN. THICKNESS	mm	MIN. 0.33	0.38
d. COLOR	-	AS PER SPEC.	GOOD
3.3 LAYING UP			
a. PAIR IDENTIFICATION	-	Black , Red	GOOD
b. NO. OF PAIR	EA	4	4
3.4 NYLON JACKET			
a. MATERIAL	-	NYLON	NYLON
b. MIN. THICKNESS	mm	MIN. 0.1	0.12
3.5 SHIELD			
a. I.S ALMYLR TAPE	-	-	0.025(t)×15(w)
b. I.S DRAIN WIRE	mm^2	0.5	0.5
c. O.S ALMYLR TAPE	-	-	0.025(t)×20(w)
d. O.S DRAIN WIRE	mm^2	0.5	0.5
3.6 OUTER SHEATH			
a. MATERIAL	-	FR-PVC	FR-PVC
b. AVE. THICKNESS	mm	MIN. 1.14	MIN. 1.29
c. MIN. THICKNESS	mm	MIN. 0.91	MIN. 1.24
3.5 APPROX. OVERALL DIA..	mm	APPROX. 15.5	15.8
4. CABLE MARKING	-	AS PER SPEC.	
5. ELECTRICAL TEST			
5.1 CONDUCTOR RES. AT 20℃	Ω/Km	MAX. 22.8	22.425
5.2 INSULATION RES. AT 20℃	MΩ.Km	MIN. 0.762	852

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TEST REPORT

CABLE TYPE : PVC/NYLON/ASV/FR-PVC

CABLE SIZE		18AWG × 1T	
TEST ITEM	UNIT	SPEC. VALUE	TEST RESULT
1. TOTAL LENGTH	m	1,000	1,000
2. APPEARANCE	-	SHALL BE GOOD	GOOD
3. CONSTRUCTION TEST			
3.1 CONDUCTOR			
a. CONSTRUCTION	EA/mm	7/0.386	7/0.386
b. OUTER DIA. (APPROX.)	mm	1.16	1.16
3.2 INSULATION			
a. MATERIAL	-	PVC	PVC
b. AVE. THICKNESS	mm	MIN. 0.38	0.42
c. MIN. THICKNESS	mm	MIN. 0.33	0.40
d. COLOR	-	AS PER SPEC.	GOOD
3.3 LAYING UP			
a. TRIAD IDENTIFICATION	-	Black , White, Red	GOOD
b. NO. OF TRIAD	EA	1	1
3.4 NYLON JACKET			
a. MATERIAL	-	NYLON	NYLON
b. MIN. THICKNESS	mm	MIN. 0.1	0.13
3.5 SHIELD			
a. ALMYLR TAPE	-	-	0.025(t)×20(w)
b. DRAIN WIRE	mm^2	0.5	0.5
3.6 OUTER SHEATH			
a. MATERIAL	-	FR-PVC	FR-PVC
b. AVE. THICKNESS	mm	MIN. 1.14	MIN. 1.26
c. MIN. THICKNESS	mm	MIN. 0.91	MIN. 1.20
3.5 APPROX. OVERALL DIA..	mm	APPROX. 7.5	7.6
4. CABLE MARKING	-	AS PER SPEC.	
5. ELECTRICAL TEST			
5.1 CONDUCTOR RES. AT 20℃	Ω/Km	MAX. 22.3	22.036
5.2 INSULATION RES. AT 20℃	MΩ.Km	MIN. 0.762	1,350

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PHYSICAL TEST REPORT

CABLE TYPE	PVC/NYLON/ASV/FR-PVC		
TEST ITEM	UNIT	SPEC. VALUE	TEST RESULT
A. INSULATION			
1. WITHOUT AGING			
1.1 TENSILE STRENGTH	N/mm²	MIN. 12.5	17.70
1.2 ELONGATION	%	MIN. 150	255
2. AFTER AGING			
2.1 TENSILE STRENGTH	%	± 25	- 3
2.2 ELONGATION	%	± 25	- 7
3. LOW TEMPERATURE BEND TEST	-	NO CRACKS	NO CRACKS
4. LOW TEMPERATURE ELONGATION TEST	%	Min. 20	75
5. PRESSURE TEST AT HIGH TEMP.	%	Max. 50	18.2
6. HEAT SHOCK TEST(CRACKING)	-	NO CRACKS	NO CRACKS
7. WATER ABSORPTION	mg/cm²	Max. 1	0.37
B. SHEATH			
1. WITHOUT AGING			
1.1 TENSILE STRENGTH	%	MIN. 12.5	18.50
1.2 ELONGATION	%	MIN. 150	300
2. AFTER AGING			
2.1 TENSILE STRENGTH	%	± 25	- 3
2.2 ELONGATION	%	± 25	- 5
3. LOW TEMPERATURE BEND TEST	-	NO CRACKS	NO CRACKS
4. LOW TEMPERATURE ELONGATION TEST	%	Min. 20	67
5. LOW TEMPERATURE IMPACT TEST	-	NO CRACKS	NO CRACKS
6. PRESSURE TEST AT HIGH TEMP.	%	Max. 50	19.3
7. HEAT SHOCK TEST(CRACKING)	-	NO CRACKS	NO CRACKS
8. FIRE RESISTANT TEST (IEC 60331)		AS PER SPEC	GOOD