

No. SP23-31-0849

Date Feb. 6, 2023

SPECIFICATION

FOR

0.6/1KV ETHYLENE PROPYLENE RUBBER INSULATED
POLYCHLOROPRENE SHEATHED FLEXIBLE CABLE

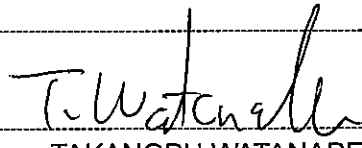
Code : 0.6/1KV F-RE-PNCT-SX $7 \times 16\text{mm}^2 + 3\text{T} \times 2.5\text{mm}^2 + 6\text{P} \times 2.5\text{mm}^2$

Quantity

Your Ref. No.

Our Ref. No.

Signed by




TAKANOBU WATANABE

Manager

Engineering Dept. I
Electric Wire & Cable Business Unit
Advanced Components & Materials Division

Proterial, Ltd.

Issue and revision record

Rev. No	Issue date	Item	Prepared by	Reviewed by	Approved by
-	Feb. 6, 2023	First issue	<i>K. Yamane</i> K.Yamane	<i>N. Ono</i> N.Ono	 T.Watanabe

1. Scope

This specification covers 0.6/1kV Ethylene Propylene Rubber Insulated Polychloroprene Sheathed Flexible Cable, which is based on VDE 0250 Part 814 and Manufacturer's Standard.

2. Construction and Materials

2.1 16mm² cores

2.1.1 Conductor

Conductor shall be stranded flexible conductor consisting of tinned annealed copper wires. Suitable separator tape shall be applied over the conductor.

2.1.2 Insulation

Insulation shall consist of ethylene propylene rubber compound.

Nominal thickness shall be shown in the attached table 1.

Ave. thick. : not less than the nominal thickness

Min. thick. : not less than 90%-0.1mm of the nominal thickness

2.1.3 Core identification

The core identification shall be made by the number on the proofed tape or the color of the tape as shown in the attached figures.(Fig.2)

2.2 2.5mm² cores

2.2.1 Conductor

Conductor shall be stranded flexible conductor consisting of tinned annealed copper wires and tinned steel wires.

Suitable separator tape shall be applied over the conductor.

2.2.2 Insulation

Insulation shall consist of ethylene propylene rubber compound.

Nominal thickness shall be shown in the attached table 1.

Ave. thick. : not less than the nominal thickness

Min. thick. : not less than 90%-0.1mm of the nominal thickness

2.2.3 Core identification

The core identification shall be made by the number printed on the insulation surface as shown in the attached figures.(Fig.2)

2.2.4 Cabbling of cores

The insulated conductors shall be cabled. Suitable fillers and binder may be applied at manufacturer's discretion, if necessary.

2.2.5 Shield braid (6P×2.5mm² only)

Shield braid consisting of tinned annealed copper wires shall be applied over the cabling. A suitable tape shall be applied over the shield braid.

2.3 Cabling of cores

Each insulated conductors and units shall be cabled. Suitable fillers may be applied at manufacturer's discretion, if necessary.

2.4 Sheath

Sheath shall consist of black polychloroprene rubber compound. Nominal thickness shall be shown in the attached table 1.

Ave. thick. : not less than 90% of the nominal thickness

Min. thick. : not less than 85% of the nominal thickness

2.5 Reinforcement

Reinforcement consisting of suitable yarn braid shall be applied the middle of sheath.

2.6 Dimension

The dimension of the cable shall be in accordance with the attached table 1.

3. Marking

Manufacturer's name and year of manufacture shall be marked by suitable method.

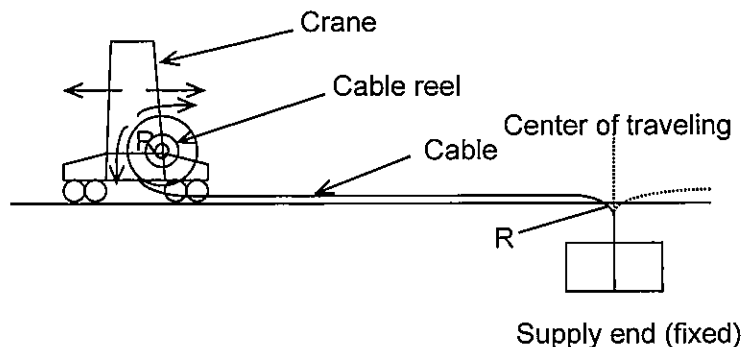
4. Inspection

Inspection shall be made on the following items prior to shipment.

Properties	Standard to comply with	Requirements	Test interval
Construction and dimensions	JIS C 3005 4.3	To comply with clause 2 and the attached Table 1	Every shipment
Withstand voltage test	JIS C 3005 4.6	To withstand AC 2500V for 5 min.	First shipment
Conductor resistance	JIS C 3005 4.4	Not more than the value in the attached Table 2	
Insulation resistance	JIS C 3005 4.7	Not less than the value in the attached Table 2	

5. Guide to use

This cable is designed for crane installation of reel system (traveling) as shown below.



R : Permissible minimum bending radius

Table 1 : Dimensions

(Code : 0.6/1KV F-RE-PNCT-SX $7 \times 16\text{mm}^2 + 3\text{T} \times 2.5\text{mm}^2 + 6\text{P} \times 2.5\text{mm}^2$)

Item		Unit	Specified value		
Conductor	No. of conductor	-	7	3T(9)	6P(12)
	Size	mm ²	16	2.5	2.5
	Construction *	No./mm	7/18/0.4TA	3/0.32TST+ 50/0.25TA	3/0.32TST+ 50/0.25TA
	Approx. diameter	mm	5.9	2.2	2.2
Nominal thickness of insulation		mm	1.2	0.9	0.9
Nominal thickness of shield braid		mm	-	-	0.3
Nominal thickness of sheath		mm	5.0		
Approx. diameter of completed cable		mm	57.0		
Maximum diameter of completed cable		mm	60.0		
Approx. weight of completed cable		kg/km	4370		

* TST: Tinned steel wire

TA : Tinned annealed copper wire

Table 2 : Characteristic

Item	Unit	Specified value		
Size	-	16	2.5	2.5
Max. conductor resistance(20°C)	Ω/km	1.24	8.21	8.21
Min. insulation resistance(20°C)	MΩ · km	400	500	500
Permissible minimum bending radius	mm	570		
Permissible maximum pulling tension **	kN	4.3		
Permissible maximum compression force ***	kN/m	4.9		

** In any case, pulling tension and compression force must not exceed these value.
For safety, regular pulling tension should be 1/3 of the permissible maximum value.
It is necessary to determine the pulling tension considering the compression force.

*** Compression force = Pulling tension / Bending radius

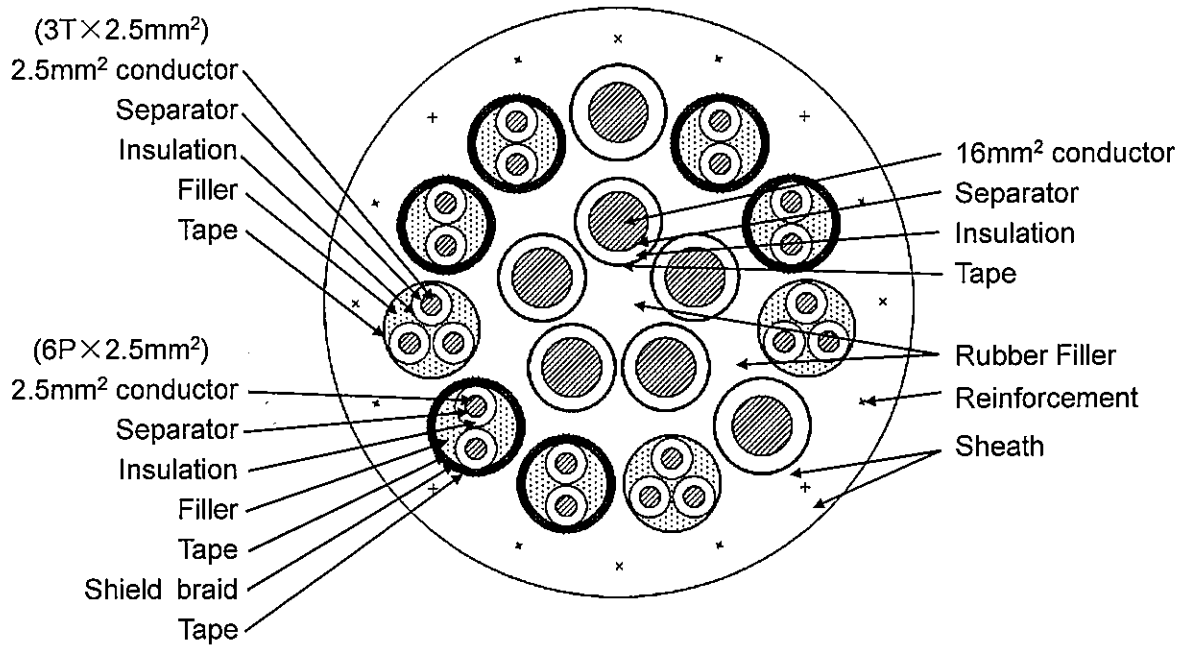


Figure 1. Cable cross section

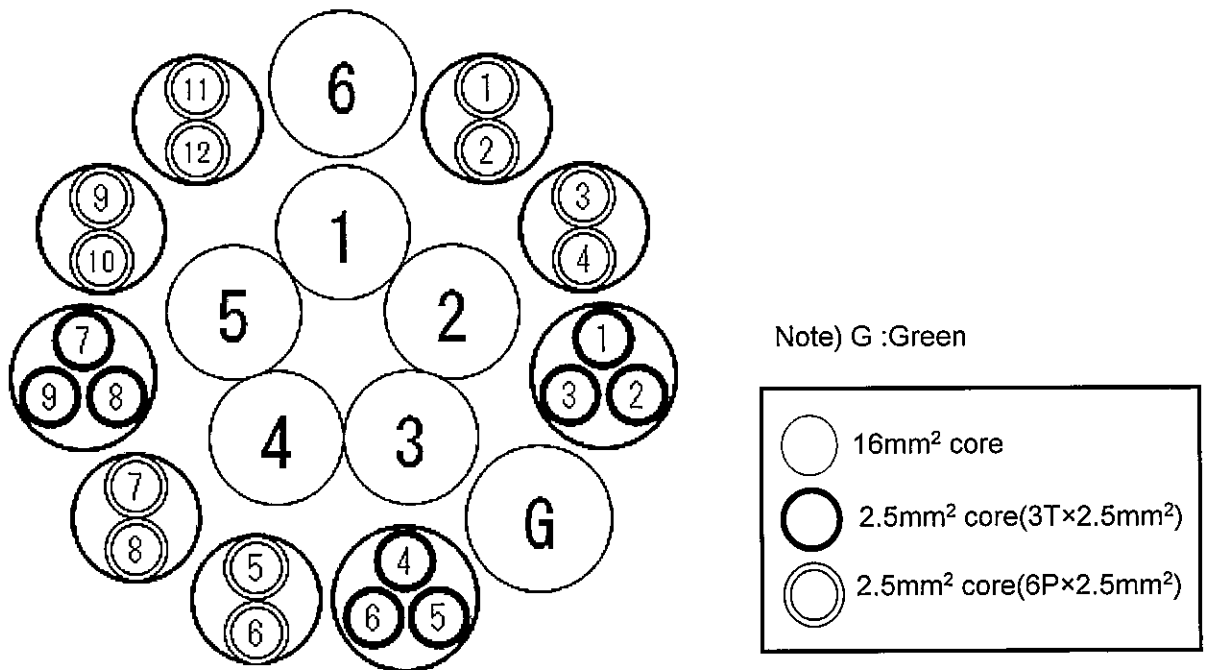


Figure 2. Core identification