No. SP23-31-0885
Date Oct. 30, 2023

SPECIFICATION

FOR

600V ETHYLENE PROPYLENE RUBBER INSULATED
POLYCHLOROPRENE SHEATHED FLEXIBLE CABLE

Code : 600V F-RE-2PNCT-SX 42×2.5mm^2+6×1.5mm^2

Quantity .....

Your Ref. No. .....

Our Ref. No. .....

Signed by T. Watanabe
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Manager

Engineering Dept. I
Electric Wire & Cable Business Unit

Proterial, Ltd.

Issue and revision record

REV. No.	Issue date	Item	Prepared by	Reviewed by	Approved by
—	Oct. 30, 2023	FIRST ISSUE	K. Yamane	N. Ono	T. Watanabe

1. Scope

This specification covers 600V Ethylene Propylene Rubber Insulated Polychloroprene Sheathed Flexible Cable, which is reference to Japanese Electrical Facility Regulation and Manufacturer's Standard.

2. Construction and materials

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 Insulation

Insulation shall consist of ethylene propylene rubber compound.
Nominal thickness shall be shown in the attached table.
Ave. thick. : not less than 90% of the nominal thickness
Min. thick. : not less than 80% of the nominal thickness

2.3 Proofed tape (1.5mm^2 cores only)

Rubber filled textile tape may be applied over the insulation

2.4 Shield braid (1.5mm^2 cores only)

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

2.5 Core identification

(2.5mm^2 cores)
The core identification shall be made by the color of the insulation. (Fig. 2)

(1.5mm^2 cores)
The core identification shall be made by the color of the tape over the insulation. (Fig. 2)

2.6 Cabling of cores

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

2.7 Sheath

Sheath shall consist of black polychloroprene compound.
Nominal thickness shall be shown in the attached table.
Ave. thick. : not less than 90% of the nominal thickness
Min. thick. : not less than 85% of the nominal thickness

A straight line shall be marked on the surface of the sheath.

2.8 Dimension

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

3. Marking

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

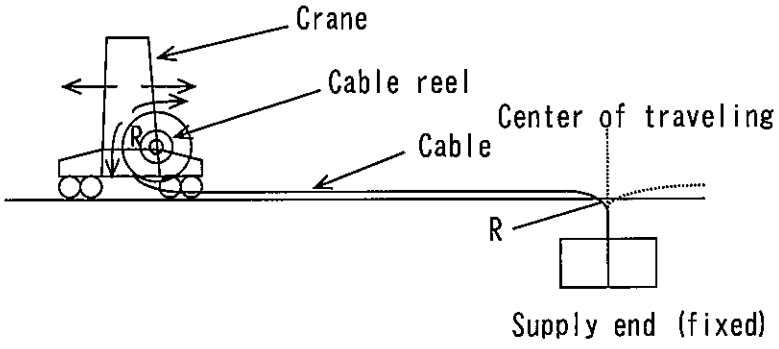
4. Inspection

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 3000V for 1 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 : Dimension

〔 Code : 600V F-RE-2PNCT-SX 42×2.5mm²+6×1.5mm² 〕

Item		Unit	Specified value	
Conductor	No. of conductor	—	42	6
	Nominal cross-section area	mm²	2.5	1.5
	Construction	No. ／mm	3/0.32TST+ 49/0.32TA	3/0.32TST+ 30/0.32TA
	Approx. diameter	mm	2.2	1.8
Nominal thickness of insulation		mm	0.8	0.8
Approx. thickness of shield braid		mm	-	0.3
Nominal thickness of sheath		mm	3.6	
Approx. diameter of completed cable		mm	42.5	
Maximum diameter of completed cable		mm	44.7	
Approx. weight of completed cable		kg/km	2720	

TST : Tinned steel wire
TA : Tinned annealed copper wire

Table 2 : Characteristic

Item	Unit	Specified value	
Nominal cross-section area	mm²	2.5	1.5
Conductor resistance at 20℃	Ω/km	8.21	13.7
Insulation resistance at 20℃	MΩ-km	500	500
Permissible minimum bending radius	mm	430	
Permissible maximum pulling tension *	kN	7.7	
Permissible maximum compression force **	kN/m	2.9	

* : In any case, pulling tension and compression force must not exceed this 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

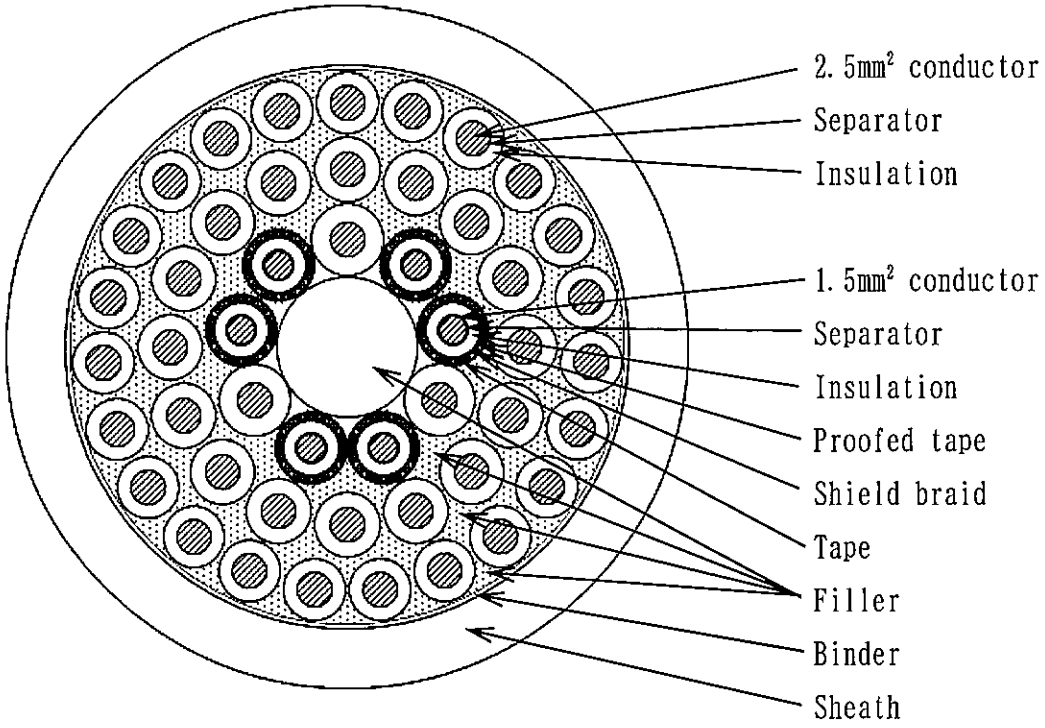
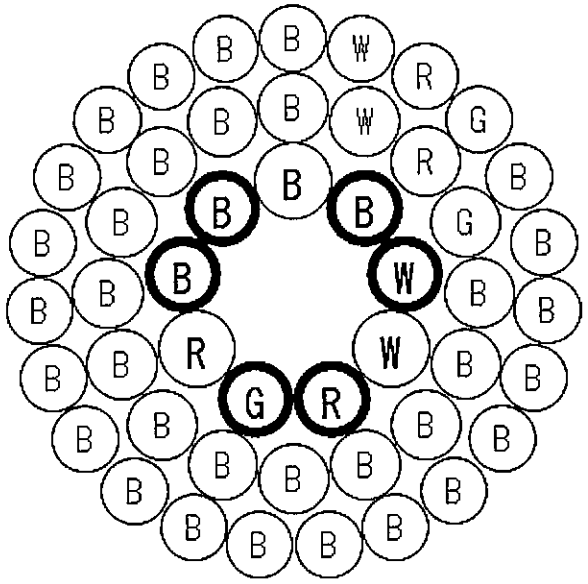


Fig. 1 Cable cross section



Note) B : Black
W : White
R : Red
G : Green

:2.5mm² conductor

:1.5mm² conductor

Fig. 2 Core identification