

No. SP23-31-0886

Date Oct. 30, 2023

SPECIFICATION

FOR

600V ETFE INSULATED
POLYCHLOROPRENE SHEATHED FLEXIBLE CABLE

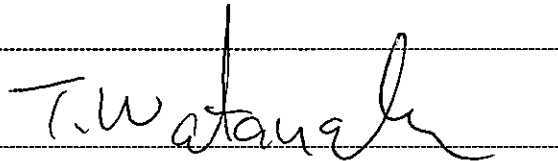
Code : 600V RE-FHNCT 54X2.5mm²

Quantity

Your Ref. No.

Our Ref. No.

Signed by



TAKANOBU WATANABE

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	<i>K. Yamane</i> K.Yamane	<i>N. Ono</i> N.Ono	<i>T. Watanabe</i> T.Watanabe

1. Scope

This specification covers 600V ETFE Insulated Polychloroprene Sheathed Flexible Cable, which is reference to 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.

2.2 Insulation

Insulation shall consist of ETFE(Copolymer of Ethylene and Tetrafluoro Ethylene)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 Core identification

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

2.4 Cabling of cores

Each insulated conductors shall be cabled together with suitable filler.

2.5 Sheath

Sheath shall consist of black polychloroprene 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 85% of the nominal thickness

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

2.6 Reinforcement

Reinforcement consisting of suitable fiber braid shall be applied the midle of sheath.

2.7 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.

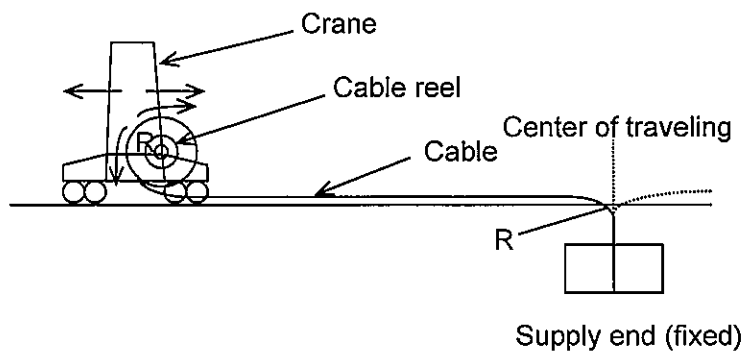
4. Inspection

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 : Dimensions

(Code : 600V RE-FHNCT 54X2.5mm²)

Item		Unit	Specified value
Conductor	No. of conductor	-	54
	Size	mm ²	2.5
	Construction	No./mm	3/0.32TST+50/0.25TA
	Approx. diameter	mm	2.2
Nominal thickness of insulation		mm	0.4
Nominal thickness of sheath		mm	4.1
Approx. diameter of completed cable		mm	38
Maximum diameter of completed cable		mm	39.9
Approx. weight of completed cable		kg/km	2440

TST : Tinned steel wire

TA : Tinned annealed copper wire

Table 2 : Characteristic

Item	Unit	Specified value
Max. conductor resistance(20°C)	Ω/km	8.21
Min. insulation resistance(20°C)	MΩ · km	400
Permissible minimum bending radius	mm	380
Permissible maximum pulling tension *	kN	8.6
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

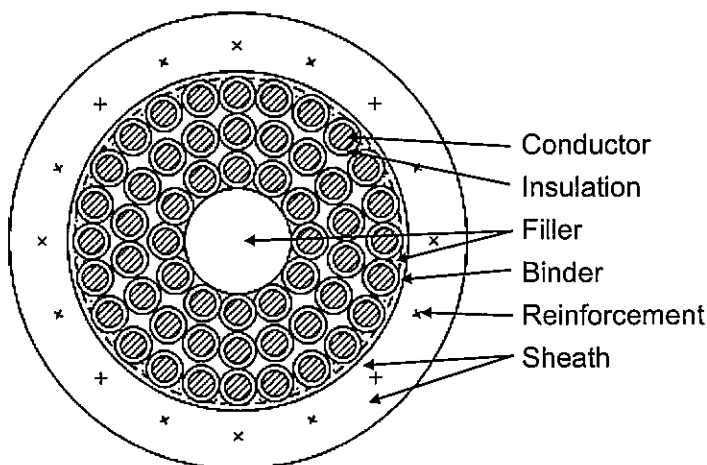


Fig.1 Cable cross section

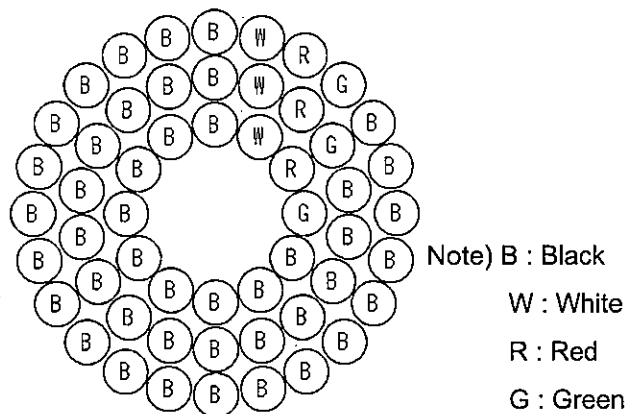


Fig.2 Core identification