

Product Name	Rat proof Cat5e cable for LAN (DTI-C5e350 RAT)	Part of prepared	Cable Engineering dept.	
		Issue date	Jun.5, 2017	
Notes		Approved	Checked	Prepared
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1. SCOPE

This specification covers the requirements of Rat proof Cat5e cable.
The cable verified to the ANSI/TIA/EIA Transmission Performance Specifications for 4-Pair 100 Category 5e Cabling.

(Features)

- The rat repellent material by the microcapsules is mixed to a sheath.
- The rat repellent material is excellent in safety because pungent component of the red chili pepper which is a food is being used as a principal raw material.
- The sheath surface on the rat repellent containing layer has a protective layer which reduces irritation when the cable is touched directly.

2. KIND

Type
0.5 4P DTI-C5e350 RAT (*)

Note: (*) in the description presents the symbol of sheath colors. (S : Gray)

3. CONSTRUCTION

Conductor	Material	-	Annealed copper wire				
	Size	-	24 AWG				
	Diameter	mm	Approx. 0.5				
Insulation	Material	-	PE (Polyethylene)				
	Color	-	Refer to Table 1.				
	Diameter	mm	Approx. 0.9				
Twisting	Composition	-	Two insulated conductors (A wire and B wire) are uniformly twisted together, with color scheme of pairs as indicated in Table 1.				
<u>Table 1. Twisted Pairs</u>							
		Pair No.	1	2	3	4	Comments
Color of Insulation	A-wire	White/ Blue	White/ Orange	White/ Green	White/ Brown	Base/Color band	
	B-wire	Blue	Orange	Green	Brown		
Stranding	Composition	-	Four pairs from No.1 to No.4 in Table 1 shall be stranded into a compact and symmetrical cable core.				
Sheath	Inner sheath (Rat repellent containing layer)	Composition	-	Cable core is wrapped with sheath cylindrically.			
		Material	-	Rat repellent containing PVC			
		Color	-	Gray			
		Thickness	mm	Approx. 0.45			
	Outer sheath (Protective layer)	Material	-	PVC			
		Color	-	Gray			
		Overall Diameter	mm	Approx. 5.8			
		Identification	-	The manufacture's name, product name and length mark shall be clearly and continually printed on the sheath.			
Cable Weight		kg/km	Approx. 35				

4. PACKING

Standard length	m	300
Packing	-	The cable shall be coiled into tangle and twist-free bundles. Each coil shall be packed in a corrugated cardboard box.
Indication to box	-	(1) Cable type and cable color (2) Length (m) (3) Lot number (4) Manufacturer's name

5. PERFORMANCE

Electric Performance	Conductor Resistance	/100m	Max. 9.38 (at 20)		
	Dielectric Strength	V-min	No broken. (To withstand 500 Volts DC or 350 Volts AC (rms).)		
	Insulation Resistance	M km	Min. 5000		
	Return Loss	dB	f=1 ~ 10MHz	Min. 20+5 log (f)	
			f=10 ~ 20MHz	Min. 25	
			f=20 ~ 100MHz	Min. 25-7 log (f/20)	
	Insertion loss	dB/100m	f=1 ~ 100MHz	Max. 1.967SQRT(f)+0.023f+0.05/SQRT(f) (at 20)	
	NEXT	dB	f=0.772 ~ 100MHz	Min. 35.3-15log(f/100)	
	MDPSNEXT	dB	f=0.772 ~ 100MHz	Min. 32.3-15log(f/100)	
	ELFEXT	dB/100m	f=1 ~ 100MHz	Min. 23.8-20log(f/100)	
	MDELTEXT	dB/100m	f=1 ~ 100MHz	Min. 20.8-20log(f/100)	
	Propagation Delay	ns/100m	f=1 ~ 100MHz	Max. 534+36/SQRT(f)	
Delay Skew	ns/100m	f=1 ~ 100MHz	Max. 45		
Test Method	-	In accordance with ASTM D 4566			

6. PRECAUTIONS

The rat repellent used in this cable is the capsaicin.

The capsaicin is chemo-synthesized with the pungent of the chill pepper

The capsaicin is micro-encapsulated by coating in the outside.

The capsaicin is safety substance which is accepted in Japanese Food Sanitation Act.

When the micro-capsule is broken and the capsaicin leaks from the cable, it is possible that this cause the swelling of skin when you touch this substance.

In case of this substance scatters in the air, this may trigger sneeze and cough.

Therefore please use with the following instructions:

- (1) When the cable is cut, please do not forget to wear the globe and not to touch the sheath directly and wear the mask in order not to suck the component of rat repellent from nose and mouth
- (2) Don't rub your eyes with the glove with which the cable is touched.
- (3) In case you touch this cable, please wash your face and hands and gargle.
- (4) Please ventilate a room when the cable is cut and laid on.

Since the amount of scattering is very small after the construction and the irritating odor do not remain after ventilating sufficiently.

According to the rat- repellent manufacturer, the irritating odor of rat repellent is transient and you can alleviate by washing face and hands, and gargling and can recover within one or two days

7. OTHER

This specification is valid for a period of one year from its issue date and shall be automatically extended thereafter for another successive year, unless one party gives the notice to the other party three months prior to the expiration thereof.