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JIS

JAPANESE INDUSTRIAL STANDARD

Polyvinyl chloride insulated wires for electrical apparatus

JIS C 3316—1993

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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Polyvinyl chloride insulated wires for electrical apparatus

C 3316-1993

1. Scope This Japanese Industrial Standard specifies electric wires insulated with compound mainly composed of polyvinyl chloride resin (hereafter referred to as "PVC"), whose conductors are flexible stranded wires (hereafter referred to as "wires") to be used mainly in wiring of electrical machinery and apparatus of not exceeding 600 V.

Remarks 1. The following standards are cited in this Standard:

JIS C 3005 Test methods for rubber or plastic insulated wires and cables

JIS C 3102 Annealed copper wires for electrical purposes

JIS C 3152 Tin coated annealed copper wires

2. The International Standard corresponding to this Standard is given below.

IEC 227-3 (1993) Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V.
Part 3: Non-sheathed cables for fixed wiring

3. The units and numerical values shown in { } in this Standard are based on the traditional units and are appended for informative reference.

2. Classification and symbols The classification and symbols shall be as shown in Table 1.

Table 1. Classification and symbol

Classification	Symbol(1)
PVC insulated wires for electrical apparatus	KIV
PVC insulated wires for electrical apparatus class 2	HKIV

Note (1) The meanings of symbols are as given below.

K: for electrical apparatus

IV: PVC insulated wires

H: class 2 insulation

3. Characteristics The characteristics of wires shall conform to Table 2 when the tests of 6. are carried out.

Table 2. Characteristics

Item		Characteristics		Applicable sub-clause of testing method
		PVC insulated wire for electrical apparatus	PVC insulated wire for electrical apparatus class 2	
Conductor resistance		Not more than the values in Attached Table 1		6.3
Dielectric withstand voltage	Spark	To withstand the test voltage of Attached Table 1.		6.4
Insulation resistance at high temperature	60° C	Not less than the values in Attached Table 1	—	6.5
	75° C	—	Not less than the values in Attached Table 1	
Tensile properties of insulation	Tensile strength	Not less than 10 MPa {1.02 kgf/mm^2}	Not less than 15 MPa {1.53 kgf/mm^2}	6.6
	Elongation	Not less than 100 %	Not less than 150 %	
Thermal aging	Tensile strength	Not less than 85 % of the value before aging	Not less than 90 % of the value before aging	6.7
	Elongation	Not less than 80 % of the value before aging		
Oil resistance	Tensile strength	Not less than 85 % of the value before immersion in oil		6.8
	Elongation			
Heat shock		No crack nor flaw to develop on the surface.		6.9
Cold bend				6.10
Heat shrinkage		Not more than 3 %		6.11