JINGDA TONGLING

PRODUCT SPECIFICATION

Polyester or polyesterimide overcoated polyamideimide enamelled round aluminum wire, class 220

Product Type: JXMW35A · Product standard: NEMA(CK)

THERMAL CLASS	STANDARD	CONDUCTOR	DIAMETER	BUILD
220 °C	NEMA MW35-A	Aluminum	0.140–5.100 mm	Heavy film

Supplier	Tongling Jingxun Special Enamelled Wire Co., Ltd.
Address	AnHui Tongling Econ-Tech Development Zone (New Zone), China
Contact	Tel: 0086-562-2685302 E-mail: ejingda@jingda.cn
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Product Type	JXMW35A

1 Scope

This standard specifies the product requirement of Class 220 polyester or polyesterimide overcoated polyamideimide enamelled round aluminum wire.

2 Normative references

The following documents is necessary for the application of this standard. For dated reference documents, only dated version applies to this standard. For undated references, the latest version (including all of the modified) applies to this standard.
GB/T 3954 Aluminum and aluminum alloys rod for electrical purposes
NEMA MW35-A POLYESTER (AMIDE) (IMIDE) OVERCOATED WITH POLYAMIDEIMIDE FILM INSULATED ROUND ALUMINUM MAGNET WIRE THERMAL CLASS 220
IEC 60851 Winding wires test method

3 Type and film thickness

Type JXMW35A class 220 polyester or polyesterimide overcoated polyamideimide enameled round aluminum wire, heavy film.

4 Conductor, insulation film and lubricant

4.1 Conductor

Conductor should be annealed aluminum wire, the raw material aluminum rod shall meet the requirement of 1A60-Φ9.5mm aluminum rod specified on GB/T 3954 (Aluminum and aluminum alloys rod for electrical purposes).

4.2 Insulation film

This wire should be with double coating, base coating is polyester or polyesterimide. Outer coating is composed with polyamideimide.

4.3 Lubricant

The surface lubricant coated enameled wire surface can be customer specified lubricant. If customer no special requirements, can choose the surface lubricant which is suitable for customers products.

5 Technical requirement

Technical requirement should meet the specification of table 1.

Table 1

No	Item	Technical requirement
1	Appearance	1) no scrape 2) smooth surface and uniform color 3) no viscidity 4) can not be scraped by nail
2	Dimension	Meet requirement of table 2
3	Electrical Resistance	Meet requirement of table 2
4	Elongation	≥15%
5	Flexibility and Adherence — Winding	After making as specified in table 3, the coating shall no crack.
	Flexibility and Adherence — Jerk test (Nominal conductor diameters up to and including 1.00mm)	No crack or lose of adherence

No	Item	Technical requirement
	Flexibility and Adherence — Peel test (Nominal conductor diameters over 1.00mm)	the coating shall show no loss of adhesion after R revolution R = 90 / Nominal Conductor Diameter
6	Heat shock	Prepare sample as specified in table 3, then 240 °C, 30min, no crack
7	Cut through	Will not cut through within 2 min under 340 °C
8	Uni-scrape	Meet requirement of table 2
9	Solvent resistance	No swell, can tolerant 1H pencil hardness.
10	Breakdown voltage	Meet requirement of table 2
11	Continuity of insulation — High voltage pinhole (up to and including 1.600mm)	≤10 pinholes / 30m
12	Environmental protection	Meet customer and EU's environmental requirement

Table 2 Technical requirements

Nominal Conductor Diameter (mm)	Conductor Tolerance (mm)	Minimum insulation thickness (mm)	Maximum Overall Diameter (mm)	Max electrical resistance (Ω/m)	Resistance to abrasion (N)		Minimum Breakdown voltage (V)
					Minimum average force to failure	Minimum force to failure	
0.140	±0.003	0.021	0.171	1.9109	/	/	2920
0.150	±0.003	0.023	0.182	1.6598	/	/	2920
0.160	±0.003	0.023	0.194	1.4551	/	/	2920
0.170	±0.003	0.025	0.205	1.2860	/	/	3250
0.180	±0.003	0.025	0.217	1.1448	/	/	3250
0.190	±0.003	0.027	0.228	1.0256	/	/	3570
0.200	±0.003	0.027	0.239	0.9242	/	/	3570
0.210	±0.003	0.029	0.252	0.8370	/	/	3900
0.220	±0.003	0.029	0.262	0.7617	/	/	3900
0.230	±0.004	0.031	0.274	0.7022	/	/	3900
0.240	±0.004	0.032	0.287	0.6439	/	/	3900
0.250	±0.004	0.032	0.297	0.5927	3.20	2.70	4220
0.260	±0.004	0.033	0.308	0.5473	3.30	2.80	4220
0.270	±0.004	0.033	0.319	0.5069	3.30	2.80	4220
0.280	±0.004	0.033	0.329	0.4708	3.40	2.90	4270
0.290	±0.004	0.035	0.340	0.4385	3.50	3.00	4270
0.300	±0.004	0.035	0.352	0.4094	3.50	3.00	4330
0.310	±0.004	0.035	0.362	0.3830	3.60	3.10	4330
0.320	±0.004	0.038	0.373	0.3592	3.60	3.10	4380
0.330	±0.004	0.038	0.385	0.3375	3.70	3.15	4440
0.340	±0.004	0.038	0.396	0.3177	3.70	3.15	4440
0.350	±0.004	0.038	0.406	0.2996	3.85	3.25	4500
0.360	±0.004	0.040	0.417	0.2830	3.85	3.25	4500
0.370	±0.004	0.040	0.428	0.2677	3.95	3.35	4560
0.380	±0.004	0.040	0.439	0.2537	3.95	3.35	4560
0.390	±0.004	0.040	0.449	0.2407	4.05	3.50	4620
0.400	±0.005	0.040	0.459	0.2299	4.05	3.50	4620
0.410	±0.005	0.042	0.471	0.2187	4.15	3.60	4620
0.420	±0.005	0.042	0.482	0.2083	4.15	3.60	4680
0.430	±0.005	0.042	0.493	0.1986	4.15	3.60	4680

Nominal Conductor Diameter (mm)	Conductor Tolerance (mm)	Minimum insulation thickness (mm)	Maximum Overall Diameter (mm)	Max electrical resistance (Ω/m)	Resistance to abrasion (N)		Minimum Breakdown voltage (V)
					Minimum average force to failure	Minimum force to failure	
0.440	±0.005	0.042	0.503	0.1895	4.30	3.70	4740
0.450	±0.005	0.042	0.513	0.1811	4.30	3.70	4740
0.460	±0.005	0.045	0.524	0.1732	4.45	3.80	4740
0.470	±0.005	0.045	0.535	0.1659	4.45	3.80	4810
0.480	±0.005	0.045	0.546	0.1590	4.45	3.80	4810
0.490	±0.005	0.045	0.556	0.1525	4.45	3.80	4810
0.500	±0.005	0.045	0.566	0.1464	4.60	3.95	4870
0.510	±0.005	0.047	0.577	0.1406	4.60	3.95	4870
0.520	±0.006	0.047	0.589	0.1352	4.60	3.95	4870
0.530	±0.006	0.047	0.600	0.1301	4.75	4.05	4930
0.540	±0.006	0.047	0.610	0.1258	4.75	4.05	4930
0.550	±0.006	0.047	0.620	0.1212	4.90	4.20	5000
0.560	±0.006	0.047	0.630	0.1169	4.90	4.20	5000
0.570	±0.006	0.051	0.641	0.1128	4.90	4.20	5000
0.580	±0.006	0.051	0.652	0.1089	4.90	4.20	5060
0.590	±0.006	0.051	0.663	0.1052	5.05	4.35	5060
0.600	±0.006	0.051	0.674	0.1017	5.05	4.35	5060
0.610	±0.006	0.051	0.684	0.0983	5.05	4.35	5060
0.620	±0.006	0.051	0.694	0.0951	5.20	4.50	5060
0.630	±0.006	0.051	0.704	0.0921	5.20	4.50	5130
0.640	±0.006	0.051	0.714	0.0892	5.20	4.50	5130
0.650	±0.006	0.051	0.726	0.0865	5.40	4.65	5200
0.660	±0.007	0.052	0.738	0.0841	5.40	4.65	5200
0.670	±0.007	0.053	0.749	0.0861	5.40	4.65	5200
0.680	±0.007	0.053	0.759	0.0792	5.40	4.65	5200
0.690	±0.007	0.053	0.769	0.0769	5.40	4.65	5200
0.700	±0.007	0.053	0.779	0.0747	5.65	4.80	5270
0.710	±0.007	0.053	0.789	0.0726	5.65	4.80	5270
0.720	±0.007	0.054	0.800	0.0706	5.65	4.80	5270
0.730	±0.008	0.055	0.812	0.0688	5.64	4.80	5270
0.740	±0.008	0.055	0.823	0.0669	5.80	4.95	5340
0.750	±0.008	0.056	0.834	0.0651	5.80	4.95	5340
0.760	±0.008	0.056	0.844	0.0634	5.80	4.95	5340
0.770	±0.008	0.056	0.854	0.0618	5.80	4.95	5340
0.780	±0.008	0.056	0.864	0.0602	6.00	5.10	5410
0.790	±0.008	0.056	0.874	0.0586	6.00	5.10	5410
0.800	±0.008	0.056	0.884	0.0572	6.00	5.10	5410
0.810	±0.008	0.057	0.895	0.0558	6.00	5.10	5410
0.820	±0.008	0.058	0.906	0.0544	6.00	5.10	5410
0.830	±0.009	0.058	0.917	0.0532	6.00	5.10	5480
0.840	±0.009	0.059	0.928	0.0519	6.20	5.25	5480
0.850	±0.009	0.060	0.939	0.0507	6.20	5.25	5480
0.860	±0.009	0.060	0.949	0.0495	6.20	5.25	5480

Nominal Conductor Diameter (mm)	Conductor Tolerance (mm)	Minimum insulation thickness (mm)	Maximum Overall Diameter (mm)	Max electrical resistance (Ω/m)	Resistance to abrasion (N)		Minimum Breakdown voltage (V)
					Minimum average force to failure	Minimum force to failure	
0.870	±0.009	0.060	0.959	0.0484	6.20	5.25	5480
0.880	±0.009	0.060	0.969	0.0473	6.40	5.45	5550
0.890	±0.009	0.060	0.979	0.0462	6.40	5.45	5550
0.900	±0.009	0.060	0.989	0.0452	6.40	5.45	5550
0.910	±0.009	0.061	1.000	0.0442	6.45	5.45	5550
0.920	±0.009	0.061	1.011	0.0432	6.45	5.45	5550
0.930	±0.010	0.062	1.022	0.0424	6.45	5.45	5620
0.940	±0.010	0.062	1.033	0.0415	6.65	5.65	5620
0.950	±0.010	0.063	1.044	0.0406	6.65	5.65	5620
0.960	±0.010	0.063	1.054	0.0397	6.65	5.65	5620
0.970	±0.010	0.063	1.064	0.0389	6.65	5.65	5620
0.980	±0.010	0.063	1.074	0.0381	6.65	5.65	5700
0.990	±0.010	0.063	1.084	0.0373	6.90	5.90	5700
1.000	±0.010	0.063	1.094	0.0366	6.90	5.90	5700
1.100	±0.011	0.065	1.197	0.0302	7.40	6.25	5850
1.200	±0.012	0.067	1.299	0.0254	7.60	6.45	5930
1.300	±0.013	0.068	1.401	0.02165	8.10	6.90	6080
1.400	±0.014	0.069	1.502	0.01867	8.40	7.15	6160
1.500	±0.015	0.071	1.606	0.01626	8.65	7.35	6240
1.600	±0.016	0.071	1.706	0.01430	8.95	7.60	6330
1.700	±0.017	0.073	1.809	0.01266	8.95	7.60	6400
1.800	±0.018	0.073	1.909	0.01129	8.95	7.60	6400
1.900	±0.019	0.075	2.012	0.01014	8.95	7.60	6400
2.000	±0.020	0.075	2.112	0.00915	8.95	7.60	6400
2.100	±0.021	0.075	2.215	0.00830	8.95	7.60	6600
2.200	±0.022	0.076	2.315	0.00756	8.95	7.60	6600
2.300	±0.023	0.078	2.417	0.00692	8.95	7.60	6600
2.400	±0.024	0.079	2.518	0.00635	8.95	7.60	6600
2.500	±0.025	0.079	2.618	0.00586	8.95	7.60	6800
2.600	±0.026	0.081	2.721	0.00541	/	/	2500
2.700	±0.027	0.081	2.822	0.00502	/	/	2500
2.800	±0.028	0.081	2.922	0.00467	/	/	2500
2.900	±0.029	0.083	3.024	0.00435	/	/	2500
3.000	±0.030	0.084	3.126	0.00407	/	/	2500
3.100	±0.031	0.084	3.226	0.00381	/	/	2500
3.200	±0.033	0.085	3.327	0.00358	/	/	2500
3.300	±0.034	0.086	3.428	0.00336	/	/	2500
3.400	±0.035	0.086	3.529	0.00317	/	/	2500
3.500	±0.036	0.086	3.629	0.00299	/	/	2500
3.600	±0.037	0.087	3.730	0.00283	/	/	2500
3.700	±0.038	0.088	3.832	0.00268	/	/	2500
3.800	±0.038	0.089	3.933	0.00253	/	/	2500
3.900	±0.039	0.089	4.033	0.00241	/	/	2500

Nominal Conductor Diameter (mm)	Conductor Tolerance (mm)	Minimum insulation thickness (mm)	Maximum Overall Diameter (mm)	Max electrical resistance (Ω/m)	Resistance to abrasion (N)		Minimum Breakdown voltage (V)
					Minimum average force to failure	Minimum force to failure	
4.000	±0.040	0.089	4.133	0.00229	/	/	2500
4.100	±0.041	0.090	4.235	0.00218	/	/	2500
4.200	±0.042	0.091	4.336	0.00207	/	/	2500
4.300	±0.043	0.092	4.437	0.00198	/	/	2500
4.400	±0.044	0.092	4.537	0.00189	/	/	2500
4.500	±0.045	0.092	4.637	0.00181	/	/	2500
4.600	±0.046	0.093	4.739	0.00173	/	/	2500
4.700	±0.047	0.094	4.840	0.00166	/	/	2500
4.800	±0.048	0.094	4.941	0.00159	/	/	2500
5.000	±0.050	0.094	5.141	0.00146	/	/	2500
5.100	±0.051	0.094	5.241	0.00141	/	/	2500

Note: 1. Nominal conductor diameter up to and including 2.500mm, using twist test method. 2. Nominal conductor diameter over 2.500mm, using steel ball test method.

6 Test method

6.1 Appearance

Visual inspection

6.2 Dimension

On a straight sample choose two locations with 1m distance, each location along the circumference divided equally to test the outer diameter for three times, the average value for these six values is the outer diameter, and then remove the film without damage the bare wire, along the bare wire repeat the above measurements, the average value of six readings shall be bare wire diameter. Film thickness is calculated on the basis of the following formula:

Film thickness = Outer diameter — Conductor diameter

Conductor roundness is the maximum value of the difference between two measured diameter values on cross section.

6.3 Conductor resistance

Electrical resistance is the d.c. resistance at 20 °C of 1 m of wire. The method used shall provide a precision of 0.5 %. If the resistance Rt is measured at a temperature t other than 20 °C, the resistance R20 at 20 °C shall be calculated by means of the following formula:

R20 = Rt / [1 + α (t − 20)]

Where t is the actual temperature in degrees Celsius during the measurement; α is the temperature coefficient in K-1. In the temperature range from 15°C to 25°C, the temperature coefficient to be used shall be: for aluminum: α20 = 4.07×10-3 K-1. One test shall be made. The electrical resistance shall be reported.

6.4 Elongation

Elongation is the increase in length expressed as a percentage of the original length. A straight piece of wire shall be elongated to the point of fracture of the conductor at a rate of (5±1)mm/s with an elongation tester or with tensile testing equipment with a free measuring length of between 200mm and 250mm. The linear increase at fracture shall be calculated as a percentage of the free measuring length. Three specimens shall be tested. The three single values shall be reported. The mean value represents elongation at fracture.

6.5 Flexibility and Adherence

6.5.1 Mandrel winding

A straight piece of wire shall be wound for 10 continuous and adjacent turns around a polished mandrel of the diameter given in table 3. The mandrel shall be rotated with a rate of 1 r/s to 3r/s with a tension applied to the wire that is just sufficient to keep it in contact with the mandrel. Elongating or twisting the wire shall be avoided. After winding, the specimen shall be examined for cracks with the magnification as given in Table 4. Three specimens shall be tested. Any cracks detected shall be reported.

Table 3 Elongation and mandrel diameters

Nominal Conductor Diameter	Elongation	Mandrel diameter
0.140~0.724	10%	3D
0.813~1.290	15%	3D
1.450~2.588	15%	5D
2.906~5.100	15%	/

Note: For intermediate nominal conductor diameters, the figure of the next larger nominal conductor diameter should be taken.

Table 4 Magnification to detect cracks

Nominal conductor diameter (mm) >	≤	Magnification a
-	0.500	6 to 10 times
0.500	2.000	1 to 6 times

a One time expresses normal vision.

6.5.2 Peel test (applicable to nominal conductor diameter over 1.000mm)

A straight piece of wire shall be placed in the test equipment consisting of two fixing devices 500mm apart on the same axis. One of these is free to rotate. The other is not but can be displaced axially and is loaded according to Table 5 to apply a tension to the rotating wire. By means of a scraper, the coating shall be removed on opposite sides of the wire and along the wire axis down to the bare conductor. The pressure on the scraper shall be sufficient to remove the coating and leave a clean smooth surface at the coating/conductor interface without scraping off a significant quantity of conductor material. The removal of the coating shall commence about 10mm from the fixing devices. The rotating device shall be driven at a speed of between 60r/min and 100r/min until the number of revolutions R as specified in the relevant standard has been reached. After peeling and rotating, the specimen shall be examined for loss of adhesion. If the coating can be removed from the wire without difficulty (for example with the thumbnail), it shall be considered to have lost its adhesion even if it has not become completely detached from the wire. One specimen shall be tested. It shall be reported, if loss of adhesion is observed.

Table 5 Load for peel test

Nominal conductor diameter (mm) >	≤	Load (N)
1.000	1.400	25
1.400	1.800	40
1.800	2.240	60
2.240	2.800	100
2.800	3.550	160
3.550	4.500	250
4.500	5.000	400

6.6 Heat shock

The specimen shall be prepared in accordance with 6.5.1. The specimen is placed into an oven with forced air circulation for a period of 30 min and at a temperature ±5°C specified in the relevant standard. After removal from the oven, the specimen shall be allowed to cool to room temperature and shall then be examined for cracks under a magnification according to table 5. Three specimens shall be tested, any crack detected shall be reported.

6.7 Cut through

Two straight pieces of wire shall be inserted into the metal block crossing each other at right angles, with the metal block pre-heated at the temperature specified in the relevant standard. The temperature shall be measured as close as possible to the crossing point and shall not vary by more than ±3°C from the specified value. The crossing point shall lie centrally under the piston. In the case of wire of a nominal conductor diameter of less than 0.200mm, two straight pieces of wire shall be placed in parallel, side by side, and a third piece shall be placed at right angles across the first two with the crossing points arranged symmetrically to the axis of the piston. After heating 2min, a load as given in Table 6 shall be applied by means of the piston. Immediately thereafter, the test voltage shall be applied between the lower and upper pieces of wire. In the case where two lower pieces are used, they shall be connected. The load and the test voltage shall be applied for 2min. Three tests shall be made, any failure shall be reported

Table 6 Loads

Conductor nominal diameter (mm) >	≤	Load (N)
0.125	0.315	2.20
0.315	0.500	4.50
0.500	0.800	9.00
0.800	1.250	18.00
1.250	2.000	36.00
2.000	-	70.00

6.8 Resistance to abrasion

A straight piece of wire shall be wiped clean, placed in the apparatus and straightened by a maximum of 1% elongation. The specimen shall then be secured in the clamping jaws and the supporting anvil adjusted to contact the specimen. The initial force applied to the scraping device shall not exceed 90% of the minimum force to failure specified in the relevant standard and shall lead to short circuit between scraper and conductor at a point between 200mm and 150mm from the fixed pivot point. The weighted scraping device shall be lowered slowly to the surface of the wire and the scraping action started. The value at which the scraper stops shall be recorded. The procedure shall be repeated twice on the same specimen, indexing around the periphery of the wire, once at 120° and once at 240° from the original position and the same information recorded. One specimen shall be tested. The three single values shall be reported. The mean value represents the average force to failure.

6.9 Solvent resistance

A straight piece of wire, approximately 150mm in length, shall be preconditioned for (10±1)min at (130±3)°C in an oven with forced air circulation. A substantial length of the wire shall then be immersed in standard solvent contained in a glass cylinder and shall be maintained therein at a temperature of (60±3)°C for a period of (30±3)min. The wire shall then be removed from the solvent. The hardness of the wire surface shall then be determined in the following manner within a period of 30s after removal from the solvent. The specimen to be tested shall be laid on a smooth hard surface according to graphic. In the case of rectangular wires, the test shall be carried out on the largest side of the wire. The pencil shall be placed on the surface of the wire at an angle of approximately (60±5)° and the sharpened edge shall be pressed slowly along the surface of the wire with a force of approximately (5±0.5)N. Three tests shall be made. It shall be reported, if the coating is removed with exposure of the bare conductor. The standard solvent shall be a mixture of: 60% by volume white spirit with maximum aromatic content of 18%; 30% by volume xylene; 10% by volume butanol. Or use solvent as agreed between purchaser and supplier.

6.10 Breakdown voltage

6.10.1 Twist test method

A straight piece of wire, approximately 400mm in length, shall be twisted back on itself for a distance of (125±5)mm on the twisting device. The ends of the wire shall be joined, and the load applied with the number of twists, as given in Table 7. The loop at the end of the twisted section shall be cut at two places to provide a maximum spacing between the cut

ends. Any bending to ensure adequate separation between the two wire ends shall avoid sharp bends or damage to the coating. The test voltage shall be applied at zero and increased at 500V/s. Five specimens shall be tested. The five single values shall be reported.

Table 7 Loads applied to the wire and number of twists

Nominal conductor diameter (mm) >	≤	Load (N)	Number of twists
0.100	0.250	0.85	33
0.250	0.355	1.70	23
0.355	0.500	3.40	16
0.500	0.710	7.00	12
0.710	1.060	13.50	8
1.060	1.400	27.00	6
1.400	2.000	54.00	4
2.000	3.500	108.00	3

6.10.2 Steel ball test method (applicable to nominal conductor diameter over 2.500mm)

A straight piece of wire of sufficient length, with the insulation removed at one end, shall be bent around a mandrel. The specimen shall be placed in the container and shall be surrounded by steel ball at least 5mm between the specimen and the inner walls of the container. The ends of the specimen shall be sufficiently long to avoid flashover. The test voltage shall be applied according to 6.11.1, between the conductor and the steel ball. Five specimens shall be tested. The five single values shall be reported.

6.11 Film continuity — High voltage pinhole

A wire specimen of 30±1m shall be pulled with a speed of (275±25)mm/s over the high voltage electrode pulley and the electrode connected to the electrical circuit, with the open-circuit d.c. test voltage adjusted according to Table 8 with a tolerance of ±5% and with a positive polarity with respect to the earthed conductor of the wire. One test shall be made. The number of faults per 30m of wire length shall be reported.

Table 8 Test voltages

Nominal conductor diameter (mm) >	≤	Voltage (d.c.) V
0.125	0.250	750
0.250	0.400	1000
0.400	1.600	1500

6.12 Eccentricity

Eccentricity test on cross section. The sample is fixed in a shaped module with cold-mounting compound (powder and liquid mixed at a 1:0.8 ratio), cured at room temperature, then ground and polished step by step with 600#, 800#, 1000# and 1500# sand paper until a mirror-bright cross section is obtained. The polished sample is examined under a microscope at 50X and then 400X. Using picture-analysis software, parallel tangents are drawn on one side of the film and the system shows the single-side film thickness. Two measurements are taken at the thickest location and two at the thinnest location, giving four film-thickness values; the maximum divided by the minimum is the film eccentricity of the sample.

7 Packaging, transportation and tag

7.1 Packaging

Wind the wire on the coil with no knot or loose, use appropriate coil according to wire size. Suitable packing to avoid damage or knot during delivery is necessary. Package requirement: use plastic bag + paper loop to package wire.

7.2 Net weight for each spool

The standard net weight and spool type for each spool shall meet the requirement on Table 9. If there is any special requirement, special packaging weight or spool shall be negotiated by both parties.

Table 9 Spools

Spool Type	D1	D2	d1	d2	d3	H1	H2	Standard net weight (kg)
PT25	230±0.5	130±0.5	30±0.5	110±0.5	215±0.3	250±0.4	280±1.5	10
PT60	296±0.8	178±0.8	45±0.5	150±0.8	269±0.8	350±1	400±2	20
PT200	400±2	250±1	375±2	224±1	100+1.5	530±2	630±2	50

7.3 In the packing and handling should be handled with care, non-collision. Adopt anti-vibration and anti-collision measures during transportation in order to avoid damage.

7.4 Enameled round aluminum wire should be stored at temperature 5~35°C and avoid sun shine.

7.5 The spool and packing case for enameled round aluminum wire shall be marked with the following information: a) Manufacture's name and registered trade mark b) Standard c) Product type and size d) Gross weight and net weight e) Date of manufacture

8 RoHs requirement

This product meets the latest RoHs on chemical substances management requirements.

Appendix Traceability number

The description for Traceability No.: e.g. A01 05 19 06 11 001 = Equipment Name · line serial no. · Year · Month · Day · Spool no. Labels also carry: Product Type, Standard, Traceability No., Size, Company Mark, Company Name, UL Mark, Bar Code, Environmental Mark.