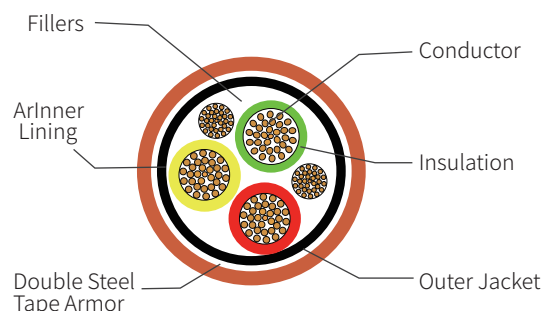
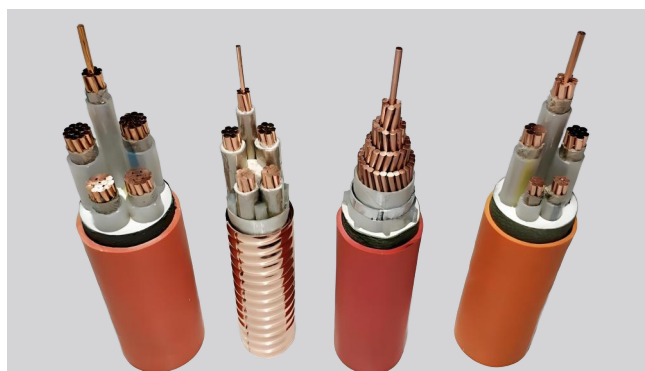


Fire-resistant power cable



Product Description

Low-smoke Free-halogen Flame-Retardancy Fire-resistant Cable

APPLICATIONS

The cable is suitable for fixed laying line of power transmission and distribution at rated voltage of 0.6/1kV. In addition to operation in normal situation the cable is cable to keep up current transmission for certain period of time in case of the flame of fire.

Permissible max. Operating temperature of cable conductor should not exceed 70°C.

Cable conductor temperature of short circuit temperature within 5s max.

Duration should not exceed 160°C.

Model	Description
NH-VV	Copper core PVC insulation PVC sheathed fire-resistant power cable
NH-YJV	XLPE insulation PV sheathed fire-resistant power cable
NH-VV ₂₂	Copper core PVC insulation steel tape armoured PVC sheathed fire-resistant power cable
NH-YJV ₂₂	XLPE insulation steel tape armoured PVC sheathed fire-resistant power cable

Recommendations for installation

Cable and ambient temperature should be above 0°C and have been so for the previous 24h.

Minimum installation radius should not be smaller than;

for single core cables: $30(D+d)$

for multicore cables: $22.5(D+d)$

where: D = actual external diameter of the cable.

d = actual diameter of the conductor.

Fire-resistant cable technology data sheet

Specifications Number of core × Nominal cross section	Constructin Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Maxresistan -ce of Conductorat 20	Approx. welght	Loading Current Layingin alr
N × mm ²	N/mm	mm	mm	mm	mm	Ω /km	kg/km	A
1 × 10	7/1.38	0.5	1	1.8	11	1.83	186	77.2
1 × 16	7/1.76	0.5	1	1.8	12	1.15	254	102.7
1 × 25	7/2.24	0.5	1.2	1.8	13.8	0.727	361	136.7
1 × 35	7/2.55	0.5	1.2	1.8	14.8	0.524	468	164.3
1 × 50	4/1.76+8/2.55	0.5	1.4	1.8	16.4	0.387	639	199.3
1 × 70	14/2.55	0.5	1.4	1.8	18.2	0.268	846	250.1
1 × 95	19/2.55	0.5	1.6	1.8	20.2	0.193	1120	302
1 × 120	4/1.76+22/2.55	0.5	1.8	1.8	21.6	0.153	1365	353.9
1 × 150	30/2.55	0.5	1.8	1.8	23.6	0.124	1691	407.2
1 × 185	37/2.55	0.5	2	1.8	25.6	0.0991	2063	462.7
1 × 240	48/2.55	0.5	2.2	1.9	28.4	0.0754	2634	554.4

Specifications Number of core × Nominal cross section	Construction Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Maxresistan -ce of Conductorat 20	Approx. welght	Loading Current Layingin alr
N × mm ²	N/mm	mm	mm	mm	mm	Ω /km	kg/km	A
2 × 10	7/1.38	0.5	1	1.8	19.6	1.83	487	59.6
2 × 16	7/1.76	0.5	1	1.8	21.6	1.15	645	77.4
2 × 25	7/2.24	0.5	1.2	1.8	25.2	0.727	907	99.4
2 × 35	7/2.55	0.5	1.2	1.8	27.2	0.524	1157	119.1
2 × 50	4/1.76+8/2.55	0.5	1.4	1.9	30.6	0.387	1552	140.4
2 × 70	14/2.55	0.5	1.4	2.1	34.6	0.268	2056	168.7
2 × 95	19/2.55	0.5	1.6	2.2	38.8	0.193	2701	203.5
2 × 120	4/1.76+22/2.55	0.5	1.8	2.3	41.8	0.153	3280	227
2 × 150	30/2.55	0.5	1.8	2.4	46	0.124	4029	255.9

Specifications Number of core × Nominal cross section	Construction Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Max resistance of Conductor at 20	Approx. weight	Loading Current Laying in air
N × mm ²	N/mm	mm	mm	mm	mm	Q/km	kg/km	A
3 × 10	7/1.38	0.5	1	1.8	20.8	1.83	617	52.3
3 × 16	7/1.76	0.5	1	1.8	22.9	1.15	831	69.1
3 × 25	7/2.24	0.5	1.2	1.8	26.8	0.727	1195	89.3
3 × 35	7/2.55	0.5	1.2	1.9	29.2	0.524	1557	107.4
3 × 50	4/1.76+8/2.55	0.5	1.4	2	32.8	0.387	2105	128.8
3 × 70	14/2.55	0.5	1.4	2.1	36.9	0.268	2813	158.1
3 × 95	19/2.55	0.5	1.6	2.3	41.7	0.193	3696	191.7
3 × 120	4/1.76+22/2.55	0.5	1.8	2.4	44.9	0.153	4506	200.5
3 × 150	30/2.55	0.5	1.8	2.6	49.6	0.124	5580	249.3
3 × 185	37/2.55	0.5	2	2.7	51.4	0.0991	6787	283.7
3 × 240	48/2.55	0.5	2.2	2.9	60.1	0.0754	8655	331.6

Specifications Number of core × Nominal cross section	Construction Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Max resistance of Conductor at 20	Approx. weight	Loading Current Laying in air
N × mm ²	N/mm	mm	mm	mm	mm	Ω /km	kg/km	A
4 × 10	7/1.38	0.5	1	1.8	22.7	1.83	773	53.9
4 × 16	7/1.76	0.5	1	1.8	25.1	1.15	1059	69
4 × 25	7/2.24	0.5	1.2	1.9	29.4	0.727	1528	90.4
4 × 35	7/2.55	0.5	1.2	2	32.2	0.524	1997	110.6
4 × 50	4/1.76+8/2.55	0.5	1.4	2.1	36.3	0.387	2721	131
4 × 70	14/2.55	0.5	1.4	2.3	41	0.268	3630	161.4
4 × 95	19/2.55	0.5	1.6	2.4	46.1	0.193	4808	196.1
4 × 120	4/1.76+22/2.55	0.5	1.8	2.6	49.9	0.153	5864	225.8
4 × 150	30/2.55	0.5	1.8	2.7	54.9	0.124	7223	255.1
4 × 185	37/2.55	0.5	2	2.9	60.1	0.0991	8825	290.5
4 × 240	48/2.55	0.5	2.2	3.1	66.8	0.0754	11255	338.8

Specifications Number of core × Nominal cross section	Construction Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Max resistance of Conductor at 20	Approx. weight	Loading Current Laying in air
$N \times \text{mm}^2$	N/mm	mm	mm	mm	mm	Q/km	kg/km	A
$3 \times 16+2 \times 10$	7/1.7071.35	0.5 0.5	1.01.0	1.8	26.5	1.151.83	1163	714
$3 \times 25+2 \times 16$	7/2.247/1.70	0.5	1.21.0	1.9	30.9	0.7271.15	1662	91.2
$3 \times 35+2 \times 16$	72.557/1.70	0.5	1.21.0	1.9	32.7	0.5241.15	2016	110.4
$3 \times 50+2 \times 25$	4/1.76+7/2.55 72.55	0.5	1.41.2	2.2	37.7	0.3870.727	2802	131.7
$3 \times 70+2 \times 35$	14/2.55772.55	0.5	1.41.2	2.4	42.1	0.2680.524	3714	162.2
$3 \times 95+2 \times 50$	19/2.554/1.76 +8/2.55	0.5	1.61.4	2.5	47.4	0.1930.387	4944	197.7
$3 \times 120+2 \times 70$	4/1.76+22/2.55 554/1.76+8/2.55	0.5	1.61.4	2.6	51.8	0.1530.387	6216	223
$3 \times 150+2 \times 70$	30/2.5514/2.55	0.5	1.81.4	2.7	55.3	0.1240.268	7263	262
$3 \times 185+2 \times 95$	37/2.5519/2.55	0.5	2.01.6	2.9	61.2	0.09910.193	9015	290.6

Specifications Number of core × Nominal cross section	Construction Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Max resistance of Conductor at 20	Approx. weight	Loading Current Laying in air
N × mm ²	N/mm	mm	mm	mm	mm	Q/km	kg/km	A
3 × 16+1 × 10	7/1.707/1.35	0.5	1.0 1.0	1.8	24.5	1.151.83	993	69.5
3 × 25+1 × 16	7/2.247/1.70	0.5	1.2 1.0	1.9	28.2	0.7271.15	1418	89.6
3 × 35+1 × 16	7/2.557/1.70	0.5	1.2 1.0	1.9	30.5	0.524115	1770	109
3 × 50+1 × 25	4/1.76+7/2.55 55	0.5	1.4 1.2	2.1	34.7	0.3870.727	2430	129.5
3 × 70+1 × 35	14/2.557/2.55	0.5	1.4 1.2	2.2	38.9	0.2680.524	3230	160.8
3 × 95+1 × 50	19/2.554/L.76 +8/2.55	0.5	1.6 1.4	2.4	43.9	0.1930.387	4301	193.9
3 × 120+1 × 50	4/1.76+22/2.55 554/1.76+8/2.55	0.5	1.6 1.4	2.5	47.8	0.1530.387	5321	224
3 × 150+1 × 70	30/2.5514/255	0.5	1.8 1.4	2.6	51.8	0.1240.268	6355	251.9
3 × 185+1 × 120	37/2.5519/2.55	0.5	2.0 1.6	2.8	57.2	0.09910.193	7685	287.1
3 × 240+1 × 120	48/2.554/1.76+22/2.55	L 0.50	2.2 1.6	3	63	0.07540.153	9960	334.4

Specifications Number of core × Nominal cross section	Construction Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Max resistance of Conductor at 20	Approx. weight	Loading Current Laying in air
N × mm ²	N/mm	mm	mm	mm	mm	Q/km	kg/km	A
4 × 16+1 × 10	7/1.707/1.35	0.50	1.0 1.0	1.8	27.2	1.151.83	1234	71.2
4 × 25+1 × 16	7/2.247/L.70	0.50	1.2 1.0	2.0	32.1	0.7271.15	1791	92.3
4 × 35+1 × 16	7/2.557/1.70	0.50	1.2 1.0	2.1	34.4	0.5241.15	2260	111.5
4 × 50+1 × 25	4/1.76+7/2.55 55 7/2.55	0.50	1.4 1.2	2.2	39.1	0.3870.727	3088	132.1
4 × 70+1 × 35	14/2.557/2.55	0.50	1.4 1.2	2.4	44.0	0.2680.524	4138	164.0
4 × 95+1 × 50	19/2.554/1.76+8/2.55	0.50	1.6 1.4	2.6	49.6	0.1930.387	5481	199.2
4 × 120+1 × 70	4/1.76+22/2.55 554/1.76+8/2.55	0.50	1.6 1.4	2.7	53.9	0.1530.387	6764	229.6
4 × 150+1 × 70	30/2.5514/2.55	0.50	1.8 1.4	2.8	58.4	0.1240.268	8190	268.0
4 × 185+1 × 95	37/2.5519/2.55	0.50	2.0 1.6	3.0	64.3	0.09910.193	110033	305.0

Specifications Number of core × Nominal cross section	Construction Number of wire/ diameter	Nominal Thickness of Fire- resistance Insulation	Nominal Thickness of PVC Insulation	Nominal Thickness of Sheath	Approx. overall diameter	Max resistance of Conductor at 20	Approx. weight	Loading Current Laying in air
N × mm ²	N/mm	mm	mm	mm	mm	Ω/km	kg/km	A
5 × 10	7/1.35	0.5	1	1.8	24.8	1.83	945	54.5
5 × 16	7/1.70	0.5	1	1.8	27.5	1.15	1301	71.9
5 × 25	7/2.24	0.5	1.2	2	32.7	0.727	1900	93.1
5 × 35	7/2.55	0.5	1.2	2.1	35.6	0.524	2484	112.5
5 × 50	4/1.76+8/2.55	0.5	1.4	2.3	40.4	0.387	3395	133.7
5 × 70	14/2.55	0.5	1.4	2.4	45.4	0.268	4514	165.3
5 × 95	19/2.55	0.5	1.6	2.6	51.2	0.193	5976	200.8
5 × 120	4/1.76+22/2.55	0.5	1.8	2.7	55.2	0.153	7294	231.1
5 × 150	30/2.55	0.5	1.8	2.9	61	0.124	9037	269.9
5 × 185	37/2.55	0.5	2	3.1	66.8	0.0991	11029	307.4

Electrical factor of cable

Operating temperature 70°C	Air temperature °C									
	5	10	15	20	25	30	35	40	45	50
	1.47	1.41	1.35	1.39	1.22	1.15	1.08	1.00	0.91	0.81

2、Low-smoke free-halogen flame-retardancy Fire-resistant wires and cables

halogenorwith littlehalogen when combustion.It can extremely reduce the damage to the instruments,equipment and body as the fire occurred.So,it was widely used to the crowded public concourses such as high-rise building,large? sized library, gymnasium,commanding&controlling building for guard against blast,station, civilairfeld,passenger waiting room,emphases cuturalrelic,subway,underground shop,etc.

The using property of the rated voltage under 35KV plastics insulated cable and wire developed by our company,comply with the requirement of GB/T12706-2020, GB/T5023-2008 and GB/T9330-2020,DJ 08-93-2002.Meanwhile,its low-smoke and free?halogen property comply with the standard of GB/T17650.1.2-2020, GB/T17651.1.2-2021.By the national technique inquiry,this type of products reach to domestic advanced level.Low-halogen flame-retardancy wire cables.

Frequency number	Model	Name	Flame retardancy Grade
1	WDZYJ(F)E	irradlated)XLPE insuatedlow-smoke free-halogen flame retardancy polyolefin sheathed powercables	A B C
	WDZ-YJ(F)LE		
	WDZ-YJ(F)Y		
	WDZ-YJ(F)LY		
	WDZYJ(F)E23	(irradiated)XLPE insuated steel tape armored low-smoke free-halo gen flame retardancy polyolefin sheathed powercables	
	WDZYJ(F)LE23		
	WDZ-YJ(F)Y23		
	WDZ-YJ(F)LY23		
	WDZYJ(F)E33	(Irradiated)XLPE insulated steel thread armored low-moke free-halogen flame retardancy polyolefinsheathed power cables	
	WDZ-YJ(F)LE33		
	WDZYJ(F)Y33		
	WDZYJ (F)LY33		
	WDZYJ(F)Y43		

requeency number	Model	Name	Flame retardancy Grade
2	WDZ-KYJ(F)E WDZ-KYJ(F)Y	(irradiated)XLPEInsulated low-smoke free-halogen flame retardancy polyolefinsheathedcontrolcables	A B C
	WDZ-KYJ(F)E23 WDZ-KYJ(F)Y23	Irradiated)XLPE insulated steel tape armored low-smoke free- halo-gen flame retardancy polyolefin sheathed controlcables	
	WDZ-KYJ(FEP WDZ-KYJ(FYP	(Irradiated)XLPE Insulated copper thread mesh screened low- smoke free-halogen flame retardancy polyolefin sheathed control cables	
	WDZ-KYJ(FEP2 WDZ-KYJ(FYP2	Irraiated)XLPE Insulated copper tape screened low-smoke free-haogenflameretardancypolyolefin sheathed controlcables	
3	WDZ-KYJ(F)E33 WDZ-KYJ(FjY33	Irradiated)XLPE insulated steel thread armored low-smoke free-halo gen flame retardancypolyolefin sheathed control cables	B C D
	WDZ-BYJ(F WDZ-BLYJ(F) WDZ-BY WDZ-BLY	(Irradiated)cross-linked type/non-cross-linked typelow- smoke free-halogen flame-retardancy polyolefin insulated electric wires	
	WDZ-BYJ(FJE WDZ-BLYJ(FJE WDZ-BYE WDZ-BLYE	(Irradiated)cross-linked type/non-cross-linked typelow- smoke free-halogen flame-retardancy polyolefin insulatedlow-smokefree-halogen flame-retardancy polyolefin sheath electric wires	
	WDZ-BYJ(F)R WDZ-BYR	(Irradiated)Cross-linked type/non-cross-linked typelow- smoke free-halogen flame-retardancy polyolefin insulated flexible electric wires	
4	WDZN-YJFJE WDZN-YJ(FjY	Copper core (irradiated)XLPE insulated low-smoke free- halogen flame-retarancy polyolefin fire resistance power cables	A B C
	WDZN-YJCFJE23 WDZNYJ(FjY23	Coppercore (Irradiated)XLPE insulated steel tape armored low-smoke free-halogenflame-retarancy polyolefin fire resistance power cables	

requeency number	Model	Name	Flame retardancy Grade
5	WDZNYJ(F)E33 WDZNYJ(FY33 WDZNYJ(FE43 WDZNYJ(F)Y43	Coppercore(Irradiated)XLPE Insulated steel thread armored low-smoke free -halogen flame-retarancy polyolefin fire resistance power cables	A B C
	WDZN-KYJ(F)E WDZN-KYJ(FjY	Copper core (Irradated)XLPE insulated low-smoke free-halogen flame-retarancy polyolefin fire resistance control cables	
	WDZN-KYJ(F)E23 WDZN-KYJ(F)Y23	Coppercore(Irradiated)XLPE insulated steel tape armored low-smoke free-halogen flame-retarancy polyolefin fire resistance control cables	
	WDZN-KYJ(F)EP WDZN-KYJ(F)YP	Coppercore(Irradiated)XLPE insulated copper thread mesh screened low-smoke free-halogen flame-retarancy polyolefin fire resistance control cables	
	WDZN-KYJ(FJEP2 WDZN-KYJ(FjYP2	Coppercore(Irradiated)XLPE insulated copper tape screened low-smoke free-halogen flame-retarancy polyolefin fire resistance control cables	
	WDZN-KYJ(F)E33 WDZN-KYJ(FjY33	Coppercore(Irradiated)XLPE insulated steel thread armored low-smoke free-halogen flame-retarancy polyolefin fire resistance control cables	
6	WDZN-BYJ(F) WDZN-BY	(Irradiated)cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardancy polyolefin insulated fire resistance electric wires	B C D
	WDZN-BYJ(F)E WDZN-EY	(Irradiated)cross-linked type/non-cross-linked type low-smoke free-halogen flame-retardancy polyolefin insulated low-smoke free-halogen flame-retardancy polyolefin sheath fire resistance electric wires	
	WDZN-BYJ(F)R WDZN-BYR	(Irradiated)cross-linked type/non-crosslinked type low-smoke free-halogen flame-retardancy polyolefin insulated low-smoke free-halogen flame-retardancy polyolefin sheath fire resistance flexible electric wires	

3、Grade and choose for the using location

Low-smoke free-low-halogen types divides into four kinds: special class, first class, second class, third class, according to the using property, fire damage and evacuation & extinguishment difficulty. Meanwhile it also complies with requirement of the table.

Grade	Using place	
Special class	The high-rise resistance building with structural height exceeded 100m (except super high-rise uptown)	
	The high-rise resistance with structural height under 100m	
First class	The high-rise civil building with height under 100m	First type building (except the resistance zone)
	The civil building with height under 24m and single floor public building with height under 24m	1、 Sickroom building with 200-bed or above, clinic building with each structural area floor of 1000m ² or above. 2、 Shopping building, exhibition building senior hotel, financial building communication building, senior office building with each structural area floor of 3000m ² or above. 3、 Library with more than 1 million books. 4、 Gymnasium with more than 3000 seats. 5、 Important research building or archives building. 6、 Civil post building 7、 Emphasizes cultural relic. 8、 Large-sized cinema, show place, auditorium and hall. 9、 Public entertainment place with structural area more than 200m ²
	Under ground civil building	1、 Subway and its station. 2、 Under ground cinema and hall; 3、 Under ground shop, hospital, exhibition hall and other commercial or public place with using area more than 1000m ² 4、 Important lab, library, and muniment room.

Grade	Using place	
Special class	The high-rise resistance bulking with structural height exceeded 100m(except super high-rise uptown)	
	The high-rise resistance with structural height under 100m	
Second class	The civil building with structural area not more than 24m	Residence of the first type building Second type bulding(except the residence)
	The civil building with structural area not more than 24m	1、 Business building, ficial building, communication building, exhibition building, hotel, office building, station, ocean/rive shipping station airport and other commercial or public places with each floor structural area from 2000m ² to 3000m ² . 2、 Post building, broadcast & TV building, electrical power control center, commanding & controlling building for guard against blast in district or county. 3、 Under medium-sized cinema and show place. 4、 Lab, library and muniment room; 5、 Public entertainment place with structural area under 200m
	Under ground civil building	1、 Tunnel with length more than 500m. 2、 Under ground shop, hospital, hotel, exhibition hall and other commercial or public place with using area not more than 1000m ² .
Third class	The other civil building that not belong to special first and second class.	

When they are laying in colligation, the low-smoke, free-low-halogen wires and cables should be flame-retardant types whose grades comply with the next table. If the location needs integrated lines and constant electricity under the outside fire, they should be fire resistance types.

The grade choice to the flame retardancy property of electrical wires

Applicable place	Section area	FLame-retardancy grade
Special class	50mm ² and above	B class
	35mm ² and under	C class
First class	50mm ² and above	C class
	35mm ² and under	D class
Second class, third class	All area	D class

The grade choice to the flame retardancy property of electrical wires

Applicable place	Flame-retardancy grade
Special class	A class
First class	B class
Second class, third class	C class

4、Technical property

- 1)、The maximum temperature of the normal operating cable conductor or short circuit (should not persist for 5 seconds): 70°C for low-smoke low-halogen PVC insulated type as normal operation, and not more than 160°C as short circuit; 90°C for XLPE insulated type thermoplastic low-smoke free-halogen polyolefin insulated type, and not more than 250°C as short circuit.
- 2)、The installation conditions and allowable constant carrying capacity of the low-smoke free-halogen cables are as same as the corresponding non-low-smoke free-halogen ones.
- 3)、The cables have the properties of low smoke, free halogen, flame retardancy and fire resistance. The details are in Table.

Sequence number	Testing item	Standard requirement (free-halogen)
1	-Single vertical combustion testing for wires and cables the distance from the skirt of upper bracket to charcoal part -the distance from combustion prolongation to the skirt of upper bracket	$\geq 50\text{mm}$ $\leq 540\text{mm}$
2	Cable colligated combustion testing-the height of charcoal part	$\leq 2.5\text{mm}$
3	Fire resistance testing	At testing, bear rated voltage and the 3A fuse will not be melted
4	PH value	≥ 4.3
5	Conductor	$\leq 10 \mu\text{s/mm}$
6	Smoke density testing-minimum light-pass rate	660%