

# 耐火电线电缆

Fire Resistant Wires and Cables



## 3.1 耐火电线 Fire Resistant Wires



**产品用途：**耐火电线是在火焰燃烧情况下能够保持一定时间安全运行的电线。耐火电线适用于高层建筑、油田、电站、矿山、化工、地铁等要求防火安全条件高的场合。又是应急电源、消防泵、电梯和通讯信号系统的理想电线。

**执行标准：**耐火电缆产品执行国家 GB/T19666-2005 标准，耐火特性符合 IEC60331:1999

**使用特性：**额定电压为 600/1000V

**Applications:** Fire resistant wires can still work safely for a certain amount of time under burning conditions. These kind of wires are suitable for high floor buildings, oil fields, power stations, mines, chemical industries and subways etc. that require strict fire precautions. They are also ideal for emergency power, firefighting, elevator and telecommunication systems etc.

**Products Standards:** Cables meet GB/T19666-2005 and fire resistant materials meet IEC60331:1999

**Working Voltages:** V<sub>p</sub>-p=600/1000V

耐火电线电缆

### 耐火指标 Fire Resistant Specifications

项目 Type	火焰温度 °C Flame Temperature °C	持续时间 Working Duration	特性 Features	执行标准 Product Standard
A	950-1000	90min	3A 熔丝不断 3A wire fuse unbroken	GB/T19216. 21-2003
B	750-800	90min	3A 熔丝不断 3A wire fuse unbroken	GB/T19216. 21-2003

### 3.1.1 NH-BV 型 450/750V 铜芯聚氯乙烯绝缘耐火电线 NH-BV 450/750 Copper Conductor PVC Insulated Fire Resistant Wires

#### 技术指标 Specifications

产品编号 Product No.	标称截面 Nominal Cross Section (mm <sup>2</sup> )	铜丝根数 / 直径 Fine Copper Wires No. / Diameter (mm)	耐火层 Fire Resistant Layer (mm)		标称绝缘厚度 Nominal Insulation Thickness (mm)	近似外径 Approximate Outer Diameter (mm)	20°C时导体电阻 Conductor Resistance (20°C) (Ω/km)	近似重量 Approximate Cable Weight (kg/km)
			厚度 Thickness (mm)	层 X 宽 Layer Number x Width (mm)				
3010 2101	1.5	1/1.38	0.14	2x6	0.8	2.5	12.1	30.0
3011 2201	1.5	7/0.52	0.14	2x6	0.8	2.8	12.1	32.0
3010 2201	2.5	1/1.78	0.14	2x6	0.8	4.5	7.41	41.0
3011 2201	2.5	7/0.68	0.14	2x6	0.8	4.8	7.41	43.0
3010 2301	4.0	1/2.25	0.14	2x8	0.8	5.0	4.61	58.0
3011 2301	4.0	7/0.85	0.14	2x8	0.8	5.3	4.61	60.0

产品编号 Product No.	标称截面 Nominal Cross Section (mm <sup>2</sup> )	铜丝根数 / 直径 Fine Copper Wires No. /Diameter (mm)	耐火层 Fire Resistant Layer (mm)		标称绝缘厚度 Nominal Insulation Thickness (mm)	近似外径 Approximate Outer Diameter (mm)	20°C时导体电 阻 Conductor Resistance (20°C) (Ω/km)	近似重量 Approximate Cable Weight (kg/km)
			厚度 Thickness (mm)	层 X 宽 Layer Number xWidth (mm)				
3010 2401	6.0	1/2.76	0.14	2x10	0.8	5.9	3.08	79.0
3011 2401	6.0	7/1.04	0.14	2x10	0.8	6.3	3.08	83.0
3011 2501	10.0	7/1.35	0.14	2x15	1.0	7.2	1.83	132.0
3011 2601	16.0	7/1.70	0.14	2x20	1.0	8.6	1.15	194.0
3011 2701	25.0	7/2.14	0.14	2x25	1.2	9.9	0.727	294.0
3011 2801	35.0	7/2.52	0.14	2x25	1.2	11.5	0.542	395.0
3011 2901	50.0	19/1.78	0.14	2x30	1.4	12.8	0.387	527.0
3011 3001	70.0	19/2.14	0.14	2x30	1.4	14.6	0.268	726.0
3011 3101	95.0	19/2.52	0.14	2x35	1.6	16.9	0.193	889.0
3011 3201	120.0	37/2.03	0.14	2x35	1.6	18.7	0.153	1233.0

### 3.1.2 NH-BVVB 型 450/750V 铜芯聚氯乙烯绝缘平型耐火电线

#### NH-BVVB 450/750V Copper Conductor PVC Insulated Flat Fire Resistant Wires

技术指标

Specifications

产品编号 Product No.	标称截面 Nominal Cross Section (mm <sup>2</sup> )	铜丝根数 / 直径 Fine Copper Wires No. / Diameter (mm)	耐火层 Fire Resistant Layer (mm)		标称绝缘厚 度 Nominal Insulation Thickness (mm)	标称护套厚 度 Nominal Sheath Thickness (mm)	近似外径 Approximate Outer Diameter (mm)	20°C时导体 电阻 Conductor Resistance (20°C) (Ω/km)	近似重量 Approximate Cable Weight (kg/km)
			厚度 Thickness (mm)	层 X 宽 Layer Number xWidth (mm)					
3020 2101	2x1.5	1/1.38	0.14	2x6	0.8	1.0	6.2x10.3	12.1	112.0
3021 2101	2x2.5	1/1.78	0.14	2x6	0.8	1.0	6.5x11.0	7.41	149.0
3020 2201	2x4.0	1/2.25	0.14	2x8	0.8	1.0	7.0x11.9	4.61	195.0
3021 2201	2x6.0	1/2.76	0.14	2x10	0.8	1.1	7.7x13.2	3.08	252.0
3020 2301	2x10.0	7/1.35	0.14	2x15	1.0	1.2	9.6x16.7	1.83	485.0

## 3.2 耐火控制电缆

### Fire Resistant Control Cables



**产品用途：**耐火电缆是在火焰燃烧情况下能够保持一定时间安全运行的电缆。耐火电缆适用于高层筑、油田、电站、矿山、化工和地铁等要求防火安全条件高的场合。又是应急电源、消防泵、电梯和通讯系统的理想电缆。

**执行标准：**耐火电缆产品执行国家 GA306.2-2001，耐火特性符合国家标准 GB/T19216.21-2003（等同 IEC60331-21:1999）

**使用特性：**额定电压为 450/750V

**工作温度：**一般聚乙烯最高不超过 70℃，交联型聚乙烯不超过 90℃

**最小弯曲半径：**无铠装电缆应不小于电缆外径 10 倍，有铠装电缆应不小于电缆外径 12 倍

**Applications:** Fire resistant wires can still work safely for a certain amount of time under burning conditions. These kind of wires are suitable for high floor buildings, oil fields, power stations, mines, chemical industries and subways etc. that require strict fire precautions. They are also ideal for emergency power, firefighting, elevator and telecommunication systems etc.

**Working Voltages:**  $V_p-p=450/750V$

**Working Temperature:** PVC less than 70℃, XLPE less than 90℃

**Minimum Bending Radius:** For non-armored cable, not less than 10X of cable diameter, for armored cable, not less than 12X of cable diameter

**Products Standards:** Cables meet GA306.2-2001 and fire resistant features mee GB/T19216.21-2003 (equal to IEC60331-21:1999)

## 耐火指标

### Fire Resistant Features

项目 Type	火焰温度℃ Flame Temperature °C	持续时间 Working Duration	特性 Features	执行标准 Product Standard
A	950-1000	90min	3A 熔丝不断 3A wire fuse unbroken	GB/T19216.21-2003
B	750-800	90min	3A 熔丝不断 3A wire fuse unbroken	GB/T19216.21-2003

## 型号说明

### Model Definition

型号 Model	产品名称 Product Name	主要使用范围 Main Usage
NH-KVV	铜芯聚氯乙烯绝缘及护套耐火控制电缆 Copper Conductor PVC Insulated And Sheathed Fire Resistant Control Cables	着火时能正常工作，适用于非常应急场所。 Work normally when on fire, applicable to emergency
NH-KVVP	铜芯聚氯乙烯绝缘及护套编织屏蔽耐火控制电缆 Copper Conductor PVC Insulated And Sheathed And Copper Wire Braid Shielded Fire Resistance Control Cables	
NH-KVVP <sub>2</sub>	铜芯聚氯乙烯绝缘及护套铜带屏蔽耐火控制电缆 Copper Conductor PVC Insulated And Sheathed And Copper Tap Shielded Fire Resistance Control Cables	
NH-KVV <sub>22</sub>	铜芯聚氯乙烯绝缘及护套钢带铠装耐火控制电缆 Copper Conductor PVC Insulated And Sheathed And Steel Tap Armored Fire Resistance Control Cables	
NH-KVVP <sub>2-22</sub>	铜芯聚氯乙烯绝缘及护套铜带屏蔽钢带铠装耐火控制电缆 Copper Conductor PVC Insulated And Sheathed And Copper Tap Shielded And Steel Tap Armored Fire Resistance Control Cables	

## 3.2.1 NH-KVV 型聚氯乙烯绝缘聚氯乙烯护套耐火控制电缆

### NH-KVV Copper Conductor PVC Insulated and Sheathed Fire Resistant Control Cables

技术指标

Specifications

产品编号 Product No.	导体芯数 x 标称截 面 Conductors No. xNominal Cross Section (mm <sup>2</sup> )	导体结构 Conductor Structure		近似外径 Approximate Outer Diameter (mm)	近似重量 Approximate Cable Weight (Kg/Km)	770°C最小绝缘厚度 Minimum Insulated Resistance (70°C) (MΩ/Km)
		铜丝根数 Fine Copper Wires No.	直径 Diameter (mm)			
3030 2104	4x1.5	1	1.38	15.2	197.0	0.001
3031 2104	4x1.5	7	0.52	15.7	206.0	0.010
3030 2204	4x2.5	1	1.78	16.2	261.0	0.010
3031 2204	4x2.5	7	0.68	16.8	399.0	0.009
3030 2304	4x4.0	1	2.25	18.0	399.0	0.0085
3031 2304	4x4.0	7	0.85	18.7	418.0	0.0077
3030 2404	4x6.0	1	2.76	19.2	503.0	0.0070
3031 2404	4x6.0	7	1.04	20.1	519.0	0.0065
3031 2504	4x10.0	7	1.35	23.3	778.0	0.0065
3030 2105	5x1.5	1	1.38	16.0	234.0	0.011
3031 2505	5x1.5	7	0.52	16.3	245.0	0.010
3030 2205	5x2.5	1	1.78	18.2	338.0	0.010
3031 2205	5x2.5	7	0.68	18.7	353.0	0.009
3030 2305	5x4.0	1	2.25	18.0	399.0	0.0085
3031 2305	5x4.0	7	0.85	18.7	418.0	0.0077
3030 2405	5x6.0	1	2.76	20.8	607.0	0.0070
3031 2405	5x6.0	7	1.04	21.8	628.0	0.0065
3031 2505	5x10.0	7	1.35	26.0	953.0	0.0065
3030 2107	7x1.5	1	1.38	17.1	294.0	0.011
3031 2107	7x1.5	7	0.52	17.6	309.0	0.010
3030 2207	7x2.5	1	1.78	19.5	429.0	0.010
3031 2207	7x2.5	7	0.68	20.3	449.0	0.009
3030 2307	7x4.0	1	2.25	21.0	546.0	0.0085
3031 2307	7x4.0	7	0.85	22.0	576.0	0.0077
3030 2407	7x6.0	1	2.76	22.5	769.0	0.0070
3031 2407	7x6.0	7	1.04	23.6	807.0	0.0065
3031 2507	7x10.0	7	1.35	28.1	1247.0	0.0065
3030 2110	10x1.5	1	1.8	21.7	435.0	0.010
3031 2110	10x1.5	7	0.52	22.4	458.0	0.010
3030 2210	10x2.5	1	1.78	24.1	594.0	0.010
3031 2210	10x2.5	7	0.68	25.2	622.0	0.009
3030 2310	10x4.0	1	2.25	26.4	793.0	0.0085
3031 2310	10x4.0	7	0.85	27.6	838.0	0.0070
3030 2410	10x6.0	1	2.76	28.5	1093.0	0.0070
3031 2410	10x6.0	7	1.04	29.9	1163.0	0.0065

产品编号 Product No.	导体芯数 x 标称截 面 Conductors No. xNominal Cross Section (mm <sup>2</sup> )	导体结构 Conductor Structure		近似外径 Approximate Outer Diameter (mm)	近似重量 Approximate Cable Weight (Kg/Km)	770°C最小绝缘厚度 Minimum Insulated Resistance (70°C) (MΩ/Km)
		铜丝根数 Fine Copper Wires No.	直径 Diameter (mm)			
3031 2510	10x10.0	7	1.35	35.5	1763.0	0.0065
3030 2114	14x1.5	1	1.38	23.5	555.0	0.011
3031 2114	14x1.5	7	0.52	24.1	594.0	0.010
3030 2214	14x2.5	1	1.78	26.0	780.0	0.010
3031 2214	14x2.5	7	0.68	27.2	817.0	0.009
3030 2314	14x4.0	1	2.25	28.5	1047.0	0.0085
3031 2314	14x4.0	7	0.85	29.9	1108.0	0.0077
3030 2414	14x6.0	1	2.76	30.8	1454.0	0.0070
3031 2414	14x6.0	7	1.04	32.4	1521.0	0.0065
3030 2119	19x1.5	1	1.38	25.7	720.0	0.011
3031 2119	19x1.5	7	0.52	26.6	757.0	0.010
3030 2219	19x2.5	1	1.78	29.1	1035.0	0.010
3031 2219	19x2.5	7	0.68	30.4	1086.0	0.009
3030 2124	24x1.5	1	1.38	30.1	920.0	0.011
3031 2124	24x1.5	7	0.52	31.1	969.0	0.010
3030 2224	24x2.5	1	1.78	33.7	1289.0	0.010
3031 2224	24x2.5	7	0.68	35.3	1352.0	0.009
3030 2130	30x1.5	1	1.38	31.7	1106.0	0.011
3031 2130	30x1.5	7	0.52	32.9	1164.0	0.010
3030 2230	30x2.5	1	1.78	35.6	1561.0	0.010
3031 2230	30x2.5	7	0.68	37.3	1673.0	0.009
3030 2137	37x1.5	1	1.38	34.0	1321.0	0.011
3031 2137	37x1.5	7	0.52	35.3	1390.0	0.010
3030 2237	37x2.5	1	1.78	38.3	1877.0	0.010
3031 2237	37x2.5	7	0.68	40.1	1968.0	0.009

耐火电线电缆

### 3.2.2 NH-KVVP 型铜芯聚氯乙烯绝缘聚氯乙烯护套铜丝编织屏蔽耐火控制电缆

NH-KVVP Copper Conductor PVC Insulated and Sheathed and Copper Wire Braid Shielded Fire Resistant Control Cables

技术指标

Specifications

产品编号 Product No.	导体芯数 x 标称截 面 Conductors No. xNominal Cross Section (mm <sup>2</sup> )	导体结构 Conductor Structure		近似外径 Approximate Outer Diameter (mm)	近似重量 Approximate Cable Weight (Kg/Km)	770°C最小绝缘厚度 Minimum Insulated Resistance (70°C) (MΩ/Km)
		铜丝根数 Fine Copper Wires No.	直径 Diameter (mm)			
3051 2104	4x1.5	7	0.52	16.8	289.0	0.010
3051 2204	4x2.5	7	0.68	19.3	395.0	0.009
3051 2304	4x4.0	7	0.85	20.5	527.0	0.0077
3051 2404	4x6.0	7	1.04	21.9	648.0	0.0065

产品编号 Product No.	导体芯数 x 标称截 面 Conductors No. xNominal Cross Section (mm <sup>2</sup> )	导体结构 Conductor Structure		近似外径 Approximate Outer Diameter (mm)	近似重量 Approximate Cable Weight (Kg/Km)	770°C最小绝缘厚度 Minimum Insulated Resistance (70°C) (MΩ/Km)
		铜丝根数 Fine Copper Wires No.	直径 Diameter (mm)			
3051 2504	4x10.0	7	1.35	25.6	943.0	0.0065
3051 2105	5x1.5	7	0.52	17.9	339.0	0.010
3051 2205	5x2.5	7	0.68	20.7	479.0	0.009
3051 2305	5x4.0	7	0.85	22.0	588.0	0.0077
3051 2405	5x6.0	7	1.04	23.3	757.0	0.0065
3051 2505	5x10.0	7	1.35	27.7	1128.0	0.0065
3051 2107	7x1.5	7	0.52	19.9	436.0	0.010
3051 2207	7x2.5	7	0.68	22.1	580.0	0.009
3051 2307	7x4.0	7	0.85	23.7	726.0	0.0077
3051 2407	7x6.0	7	1.04	25.4	949.0	0.0065
3051 2507	7x10.0	7	1.35	29.9	1475.0	0.0065
3051 2110	10x1.5	7	0.52	24.2	613.0	0.010
3051 2210	10x2.5	7	0.68	27.0	788.0	0.009
3051 2310	10x4.0	7	0.85	29.4	1018.0	0.0077
3051 2410	10x6.0	7	1.04	31.9	1390.0	0.0065
3051 2510	10x10.0	7	1.35	37.3	2936.0	0.0065
3051 2114	14x1.5	7	0.52	25.9	763.0	0.010
3051 2214	14x2.5	7	0.68	29.4	1025.0	0.009
3051 2314	14x4.0	7	0.85	31.7	1301.0	0.0077
3051 2414	14x6.0	7	1.04	34.4	1750.0	0.0065
3051 2119	19x1.5	7	0.52	28.8	975.0	0.010
3051 2219	19x2.5	7	0.68	32.2	1292.0	0.009
3051 2124	24x1.5	7	0.52	32.9	1193.0	0.010
3051 2224	24x2.5	7	0.68	37.3	1629.0	0.009
3051 2130	30x1.5	7	0.52	34.9	1443.0	0.010
3051 2230	30x2.5	7	0.68	39.3	1934.0	0.009
3051 2137	37x1.5	7	0.52	37.3	1693.0	0.010
3051 2237	37x2.5	7	0.68	42.8	2355.0	0.009