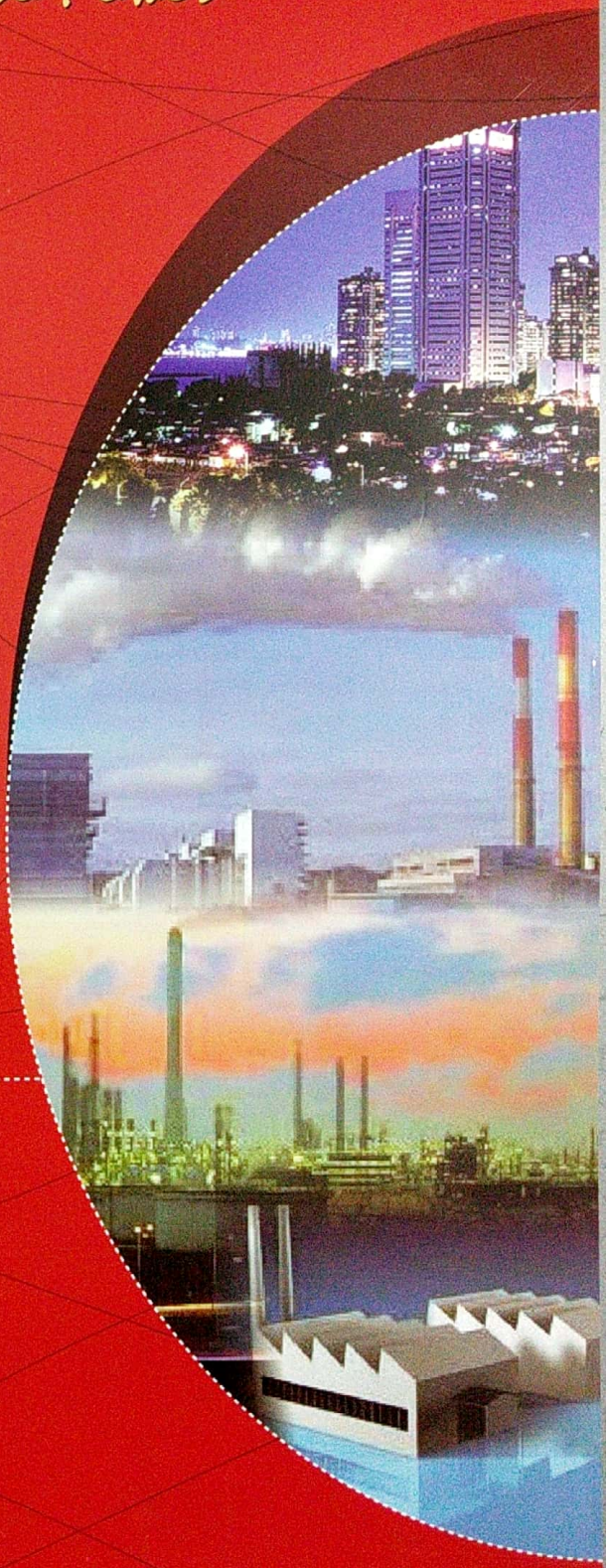
Rajnigandha®
WIRES & CABLES

Connecting People to Power

Rajnigandha® Cables, an ISO 9001:2015 certified company, a leading manufacturer of quality FR/FR-LSH/ZHFR insulated wires & cables, continue its persuasion for providing total protection in power transmission. The priority being total consumer satisfaction, the group has state of the art manufacturing facility for special grade quality PVC wires & cables as per ISI standards. As a mark of recognition of their commitment for consistent quality, a host of prestigious clients in various sectors like Central Govt., State Govt., Defence Service, Utility & Public Sector Units, Hospitality, Infocom, Health & Medical Care and Leading Architects/Consultants pledged their support and made the brand a perfect one over the decades.



Quality with no compromise

All Rajnigandha products are designed and manufactured to the Industry's strictest quality standards, resulting in an incomparable reputation for reliability.

ISI ISO 9001 TAC FIA

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Rajnigandha®
WIRES & CABLES

Wires with high quality & reliability

CONDUCTOR

Rajnigandha® Wires & Cables are manufactured using Electrolytic grade copper with 99.97% purity having 100% conductivity, drawn, annealed and tightly bunched together to get perfect concentric shape without any loose strands. The higher purity & conductivity ensures superior working of the wires throughout their life.

DOUBLE INSULATION FOR PROTECTION

The insulation is carried out on state of the art high speed double extrusion lines with self centering cross head driven by microprocessor enabling to maintain the conductor perfectly in the center of insulation from all sides of conductor and preventing short circuit occurrences due to uneven thickness and eccentricity of insulation. Automatic diameter controllers ensures precision centering and perfect concentric insulation. Double protection is assured with the use of non-contaminated PVC and has insulation in two layers with primary wall consisting thick virgin natural PVC brimmed with a thin colour layer for right protection and clear colour identification.

Flame Retardant (FR) PVC Insulated Wires

FR PVC compounds are specially formulated insulating material procured from reputed manufacturers with additional FR properties whose values exceed the specifications laid down by The Bureau of Indian Standards. These compounds are resistant to moisture, oil, alkalis & grease and has high insulation and dielectrical values. The FR properties with high Oxygen and Temperature index help in restricting propagation of fire at high temperatures and enables the wire to withstand overloads preventing electric mishaps.

Flame Retardant Low Smoke & Halogen (FR-LSH) PVC Insulated Wires

FR-LSH PVC compounds are specially formulated insulating material procured from reputed manufacturers which is resistant to moisture, oil, alkalis and grease and has high insulation and dielectric values. During fire, ordinary insulation material emits black thick smoke which restricts visibility and hampers rescue operations. The FR-LSH properties with high Oxygen and Temperature Index emits less Toxic gases and has low Halogen generation in comparison to PVC insulated wires. It restricts the spreading of flames. Transparent & less hazardous smoke helps safe evacuation during fire.

Zero Halogen Flame Retardant (ZHFR) Insulated Wires

ZHFR wires & cables are insulated with specially formulated Zero Halogen Flame Retardant compound procured from reputed manufacturers which makes wires long lasting and fire retardant. The insulation and sheath material of these cables are composed with polymers and on the basis of pure Hydrocarbons. The special polymers has the required physical, electrical & thermal properties. In case of fire, these cables do not emit toxic and poisonous fumes with almost nil smoke which enables safe evacuation and no reaction to eyes, mouth, nose, throat and lungs. The flame retardant nature of compound retards the spread of fire and thus ensures longer electrical functionality under fire.

Rajnigandha®
WIRES & CABLES

Wires with high quality & reliability

Sector We Supply

Rajnigandha® Wires & cables are used all over the country by a wide spectrum of industries, in a great variety of applications. From architects and builders to industrial and public sector clients, from power plant and telecommunications giants to the railways and armed forces, we supply our product across sectors, including:-

Property Developers	Contractors
Industries	Government/PSUs/Utilities
MNCs	Banks
IT Parks/Data Centers	Airports
Hospitals	Hotels
SEZ/EOU Units	Institutions

Rajnigandha® Single Core Unsheathed 1.1 kv Flexible Copper Wire

Nominal Cross-Section Area of Conductor	Nos. / Diameter of Wires (mm)	Nominal Thickness of Insulation	Current Carrying Capacity (Amps)		Conductor Resistance at 20°C (Max)
			In Conduit	Unenclosed	
1.0 Sqmm	32/0.20	0.60 mm.	11	12	19.50 Ohm/km
1.5 Sqmm	30/0.25	0.60 mm.	13	16	13.30 Ohm/km
2.5 Sqmm	50/0.25	0.70 mm.	18	22	7.98 Ohm/km
4.0 Sqmm	56/0.30	0.80 mm.	24	29	4.95 Ohm/km
6.0 Sqmm	84/0.30	0.80 mm.	31	37	3.30 Ohm/km
10.0 Sqmm	140/0.30	1.00 mm.	42	51	1.91 Ohm/km

Rajnigandha® Single Core Unsheathed Heavy Duty 1.1 kv Flexible Copper Cable

Nominal Cross-Section Area of Conductor	Nos. / Diameter of Wires (mm)	Nominal Thickness of Insulation	Current Carrying Capacity (Amps)	Conductor Resistance at 20°C (Max)
16 Sqmm	126/0.40	1.00 mm.	68	1.210 Ohm/km
25 Sqmm	196/0.40	1.20 mm.	86	0.780 Ohm/km
35 Sqmm	276/0.40	1.20 mm.	110	0.554 Ohm/km
50 Sqmm	396/0.40	1.40 mm.	145	0.386 Ohm/km
70 Sqmm	360/0.50	1.40 mm.	214	0.268 Ohm/km
95 Sqmm	475/0.50	1.60 mm.	254	0.193 Ohm/km
120 Sqmm	608/0.50	1.60 mm.	300	0.153 Ohm/km
150 Sqmm	750/0.50	1.80 mm.	340	0.124 Ohm/km
185 Sqmm	925/0.50	2.00 mm.	390	0.0991 Ohm/km
240 Sqmm	1221/0.50	2.20 mm.	460	0.0754 Ohm/km

Rajnigandha® PVC insulated and PVC sheathed Copper Flexible 2, 3 and 4 core Round Cable Voltage Grade upto 1.1 kv Conforming to IS:694/2010

Nominal Cross-Section Area of Conductor	Nos. / Diameter of Wires (mm)	Insulation Thickness (nom.)	Nominal Thickness of PVC Sheath (mm)			Approximate overall Dia of Cable (mm)		
			2 Core	3 Core	4 Core	2 Core	3 Core	4 Core
1.0 Sqmm	32/0.20	0.60	0.9	0.9	0.9	7.3	7.7	8.5
1.5 Sqmm	30/0.25	0.60	0.9	0.9	0.9	7.8	8.4	9.5
2.5 Sqmm	50/0.25	0.70	1.0	1.0	1.0	9.5	10.0	11.0
4.0 Sqmm	56/0.30	0.80	1.0	1.0	1.0	11.0	11.5	12.8
6.0 Sqmm	84/0.30	0.80	1.1	1.1	1.1	12.5	14.0	15.0
10.0 Sqmm	140/0.30	1.00	1.2	1.2	1.3	16.0	17.0	19.0
16.0 Sqmm	126/0.40	1.00	1.2	1.2	1.3	18.6	20.0	21.5
25.0 Sqmm	196/0.40	1.20	1.4	1.5	1.6	23.0	25.0	26.5

Rajnigandha® FR/FR-LSH/ZHFR Advantage

Tests	Significance	Specification	Specified Value	Typical Values		
				FR	FR-LSH	ZHFR
Critical Oxygen Index	To determine % of Oxygen required for combustion at room temperature of insulating material	IS:694/2010	min. 29%	>29%	>31%	>32%
Temperature index	To determine at what temperature Normal oxygen content of 21% in air will support combustion of insulating material	IS:694/2010	min. 250°C	>250°C	>250°C	>300°C
Smoke Density Rating	To determine the visibility under fire of insulating material	IS:694/2010	min. 60%	—	<60%	<20%
Acid Gas Generation	To determine the % of release of HCL acid gas from the insulating material under fire	IS:694/2010	max. 20%	—	<20%	0.5%

Notes:

1. The conductor construction given in all above tables are indicative only and as per IS, the size of the conductor is determined by its resistance only.
2. 'Rajnigandha Cables Pvt. Ltd' has the rights to modify, withdraw, amend the catalogue without any prior notice.
3. All information given here in is in good faith. 'Rajnigandha Cables Pvt. Ltd' shall not be liable for any damage arising out of incorrect use. Warranty will be for replacement of material only, if found defective provided such defects are due to faulty design or bad workmanship or bad materials are used.
4. Standard colours will be Red, Yellow, Blue, Black, Green, White and Grey or any other colour as per buyers' requirement.

Rajnigandha® WIRES & CABLES

Authorized Stockist

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Rajnigandha®

WIRES & CABLES

Connecting People to Power

Rajnigandha ® Cables, an ISO 9001:2015 certified company, a leading manufacturer of quality HFFR Thermoplastic insulated wires and cables, continue its persuasion for providing total protection in power transmission. The priority being total consumer satisfaction, the group has state of the art manufacturing facility for special grade Halogen Free Flame Retardant Low Smoke wires & cables as per IS:17048. As a mark of recognition of their commitment for consistent quality, a host of prestigious clients in various sectors pledged their support and made the brand a perfect one over the decades.

CONDUCTOR

Rajnigandha ® Wires & Cables are manufactured using electrolytic grade copper with 99.97% purity having 100% conductivity, drawn, annealed and tightly bunched together to get perfect concentric shape without any loose strands. The higher purity and conductivity ensures superior working of the wires throughout their life.

SPECIAL INSULATION FOR PROTECTION

The insulation is carried out on state of the art high speed double extrusion lines with self-centering cross head driven by microprocessor enabling to maintain the conductor perfectly in the center of insulation from all sides of conductor and preventing short circuit occurrences due to uneven thickness and eccentricity of insulation. Automatic diameter controllers ensure precision centering and perfect concentric insulation. Double protection is assured with the use of non-contaminated insulating compound and has insulation in two layers with primary wall consisting thick virgin natural insulating compound brimmed with a thin colour layer for right protection and clear colour identification.

HALOGEN FREE FLAME RETARDANT (HFFR) INSULATED WIRES

Rajnigandha® HFFR wires & cables, made in conformance to IS:17048, are insulated with specially formulated thermoplastic compound procured from reputed manufacturers which makes wires long lasting and fire retardant. The insulation and sheath material of these cables are composed with polymers and on the basis of pure hydrocarbons. The special polymers have the required physical, electrical and thermal properties. In case of fire, these cables do not emit toxic and poisonous fumes with almost nil smoke which enables safe evacuation and no reaction to eyes, mouth, nose, throat and lungs. The flame retardant nature of compound retards the spread of fire and thus ensures longer electrical functionality under fire. This special polymer requires a temperature of 280°C to melt/burn which is much higher than a normal PVC. This polymer emits only 2% transparent and non-toxic smoke while burning. This ensures that people trapped in fire can breathe easy facilitating better chances of their rescue. Rajnigandha ® HFFR wires are practically Halogen free and are, therefore, environment friendly, protecting generations against the greenhouse effect.

Quality with no compromise

All Rajnigandha® products are designed and manufactured to the Industry's strictest quality standards, resulting in and incomparable reputation for reliability.

IS : 17048 ISO 9001 TAC FIA

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Rajnigandha® Single Core Unsheathed 1.1 kv Flexible Copper Wire Conforming to IS:17048

Nominal CSA of Conductor	Nos. / Diameter of Wires (mm)	Nominal Thickness of Insulation (mm)	Current Carrying Capacity (Amps)		Conductor Resistance at 20°C (Max)
			In Conduit	Unenclosed	
1.0 Sqmm	14/0.30	0.70	15	16	18.10 Ohm/km
1.5 Sqmm	30/0.25	0.60	16	19	13.30 Ohm/km
2.5 Sqmm	50/0.25	0.70	23	26	7.98 Ohm/km
4.0 Sqmm	56/0.30	0.80	29	33	4.95 Ohm/km
6.0 Sqmm	84/0.30	0.80	37	41	3.30 Ohm/km
10 Sqmm	140/0.30	1.00	51	56	1.91 Ohm/km
16 Sqmm	126/0.40	1.00	68	73	1.21 Ohm/km

Rajnigandha® Multi Core 1.1 kv Flexible Copper Cables Conforming to IS:17048

Nominal CSA of Conductor	Nos. / Diameter of Wires (mm)	Nominal Thickness of Insulation (mm)	Nominal Thickness of Sheath (mm)			Maximum Overall Dia of Cable (mm)		
			2 Core	3 Core	4 Core	2 Core	3 Core	4 Core
1.0 Sqmm	14/0.30	0.70	0.9	0.9	0.9	7.6	8.1	8.8
1.5 Sqmm	30/0.25	0.60	0.9	0.9	1.0	8.9	9.4	10.4
2.5 Sqmm	50/0.25	0.70	1.0	1.0	1.0	10.3	10.9	12.0
4.0 Sqmm	56/0.30	0.80	1.3	1.3	1.4	11.6	12.5	14.1
6.0 Sqmm	84/0.30	0.80	1.4	1.4	1.4	13.7	14.8	16.7
10 Sqmm	140/0.30	1.00	1.5	1.5	1.6	16.7	18.1	20.3
16 Sqmm	126/0.40	1.00	1.5	1.6	1.7	19.1	20.6	23.1

Rajnigandha® HFFR Advantage

Tests	Significance	Specification	Specified Value	Typical Values
Critical Oxygen Index	To determine % of Oxygen required for combustion at room temperature of insulating material	IS:17048/2018	Min. 31%	>32%
Temperature Index	To determine at what temperature normal oxygen content of 21% in air will support combustion of insulating material	IS:17048/2018	Min. 250°C	>300°C
PH Value	Assessment of Halogen	IS:17048/2018	Min. 4.3 PH	>4.5 PH
Conductivity	Assessment of Halogen	IS:17048/2018	Max. 10 us/mm	<10.0 us/mm
Smoke Density Light Transmission (For outersheath)	To determine the visibility under fire of sheath material	IS:17048/2018	Min.70%	>70%

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