



Flame
Retardant



Halogen and
Smoke Free

CHI WAS ^{CAB®}
WIRES & CABLES

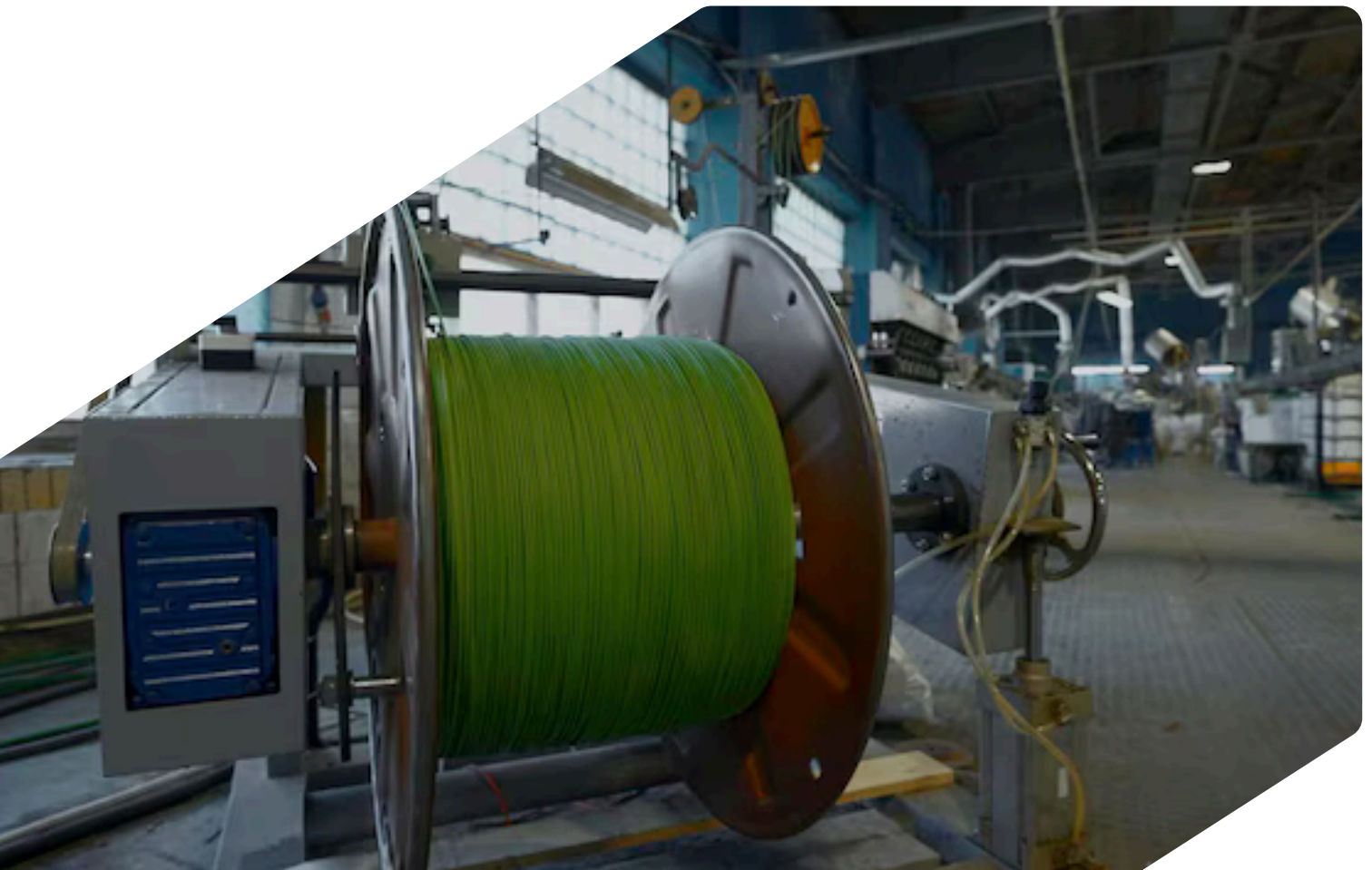
BUILDING RELATIONSHIPS
THROUGH PERFORMANCE



About **Company**

CHIWAS Wires & Cables is a renowned wiring and cabling solution partner. We have dominated the trade and engineering of wires and cables for over two decades with dynamic and pioneering technology. Chiwas wires and cables are designed and manufactured by the industry's best and are continually evolving to stay ahead of market demands. Our trusted products are designed and fabricated with efficiency and focus on the minutiae to ensure a satisfactory experience for every customer.

CHIWAS Wires & Cables are credited to be a one-stop enterprise that manufactures and sells a variety of wiring and cabling solutions for diverse applications. As an established enterprise we promise to deliver reliable and standard wiring and cabling solutions for your specific needs at a competitive price.





MISSION & VISION

With a commitment to quality and innovation, CHIWAS has consistently provided top-notch products that meet the evolving needs of various industries. Our extensive range of wires and cables is designed to deliver exceptional performance, durability, and safety, ensuring that our clients can rely on us for their most critical applications.

CHIWAS have been manufacturing various kinds of industrial cables & wires. Starting as a manufacturer of special purpose cables, the company has expanded its product range to include LT Power & Control cables, Instrumentation & Screened cables, Fire Survival cables, Solar cables, Coaxial cables, Mining cables, Rubber cables, Composite cables, High Temperature Cables, A.B. cables, Overhead conductors, House wires etc.

Our products are engineered with precision and adhere to the highest standards of quality and safety. We are committed to innovation and sustainability, continuously exploring new technologies and materials to enhance the performance and eco-friendliness of our wires and cables.

CHIWAS Wires & Cables, we believe in fostering strong relationships not only with our clients but also within our community. We actively participate in various social initiatives and environmental programs, aiming to make a positive impact on society and the planet. Our corporate social responsibility (CSR) efforts include supporting education, healthcare, and environmental conservation projects, reflecting our commitment to creating a better future for a globalized world.

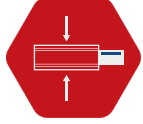
The company is managed by an enterprising team of highly professional, technically qualified and well experienced personnel having proven expertise in the cable industry and management experts from leading engineering and industry background. The board comprises of engineers, technocrats and professionals from India, Canada & France.

We have the vision, the commitment and the expertise to be the market leader. For us, leadership does not mean the biggest, but the best in terms of quality of our products, timely delivery, value advantage, all round satisfaction and trust for our customers.

Quality Assurance and Timely Delivery continue to be the driving force at Special Cables. In the changing world our focus remains on supplying high quality products at very competitive prices. Our mission is to continue to remain the preferred supplier to our valued customers and to strive for growth in existing and new markets.

We passionately follow the philosophy of building long term relationship with our associates, customers, suppliers and employees and have strong bonds of trust, mutual understanding and reliability.

Essence and Traits



TRIPLE LAYER INSULATION FOR TRIPLE PROTECTION

Chiwas Cables feature a distinctive triple layer of insulation, providing three times the protection. This one-of-a-kind characteristic is exclusive to Chiwas.



Temperature Rating

The base layer can endure conductor temperatures from 700°C to 1600°C, typical during short circuits. The middle and top layers use highly flame-retardant materials (FRLS and ZHFR), offering triple protection for life and property.





99.9% PURE COPPER – PUREST TO THE CORE

At the core of Chiwas Cables is the highest purity Electrolytic Grade Copper as against lower grade copper used in ordinary cables that offer poor conductivity. With greater than 100% conductivity as per IACS (International Annealed Copper Standard), the energy losses are minimal resulting in lower power bills.



PURE PVC INSULATION

Pure, superior grade Virgin PVC resin and compounding ingredients are used to produce and tailor-made PVC compound for each type of cable that has higher insulation resistance, thermal stability and exceptional fire retarding properties. The purity inside ensures safety, reliability and long cable life.

FLAME RETARDANT (FR)

Chiwas FR Cables: Exceptional Flame Retardant Solutions

As a frontrunner in cable technology innovation, Chiwas proudly introduces its Flame Retardant (FR) cables, crafted to redefine safety, reliability, and performance standards.

With an emphasis on reducing heat generation and stopping fire spread, Chiwas' FR cables deliver outstanding features to fulfill your most challenging electrical requirements.

Enchanting Highlights of Chiwas FR Cables

Heat Dissipation and Flame Retardation

The HRFR layer stands as the foremost guardian against the surges of heat generated by the flow of current. In addition to this, it boasts formidable flame retardant properties, elevating the safety measures in place.

Triple-Layer Flame Retardancy

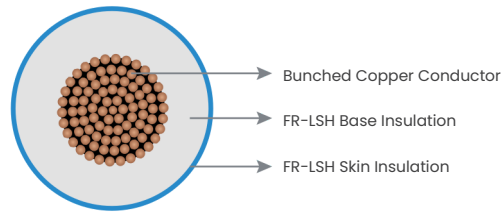
The middle and upper Flame Retardant (FR) layers unite in a harmonious dance, effectively thwarting the spread of flames should a fire ignite, thereby reinforcing fire safety protocols.

Temperature Resistance

Crafted with precision, the HRFR PVC layer is designed to withstand temperature spikes of up to 105°C, a threshold that may be encountered due to high power consumption, voltage fluctuations, or sudden electrical surges.

TECHNICAL DATA

Nominal Voltage (U0/U)	:	600/1100 V
Max Operating Temperature	:	850c
Temperature Range	:	-150C to + 850C
Approvals	:	IS 8130:2013
Flammability	:	IEC 60332 - 1:2004
Minimum Bending Radius	:	8D
Oxygen Index	:	Minimum 29 %
Temperature Index	:	Minimum 2500C



SINGLE CORE UNSHEATHED PVC INSULATION COPPER CONDUCTOR CABLES (CONFIRMING TO IS: 694 – 2010)

SINGLE CORE, UNSHEATHED CABLES IN VOLTAGE GRADE 1100 V						
Nominal area of Conductor (Sq mm)	No. of Wire/ Nominal diameter (Sq mm)	Thickness of Insulation (Sq mm)	Overall Diameter (Sq mm)	Curent carying capacity 2 cables (single phase)		Max DC Resistance @ 20° C (Ohm/Km)
				In conduit / trunking (Amps)	Unenclosed-clipped directly to a surface or cable tray (Amps)	
0.50	16/0.2	0.6	2.2	4	6	39.00
0.75	24/0.2	0.6	2.4	7	7	26.00
1.0	14/0.3	0.6	2.7	13	12	18.10
1.5	22/0.3	0.7	3.0	16	16	12.10
2.5	36/0.3	0.8	3.6	22	22	7.41
4.0	56/0.3	0.8	4.1	29	29	4.95
6.0	84/0.3	0.8	4.7	37	37	3.30

Standard Colours : Black, Red, Blue, Yellow and Green (for earthing).
 Supplied in 90 metre lengths in attractive cartons. | BIS licence No. CML-7300109204
 As per IS 3961 (Part V) : 1968 | As per conductor Class 5 of IS 8130 : 2013



COLOUR: RED, YELLOW, BLUE, BLACK, GREEN & WHITE

FLAME RETARDANT – LOW SMOKE (FR-LS)

Chiwas FRLS Cables: Advanced Flame Retardant Low Smoke Solutions Chiwas presents its Flame Retardant Low Smoke (FRLS) cables, redefining safety and performance standards. With a strong emphasis on flame retardancy and reduced smoke emission, Chiwas's FRLS cables offer a comprehensive solution for applications demanding heightened fire safety.

Magnificent Attributes of Chiwas FR-LS Cables

Enhanced Flame Retardancy and Low Smoke Characteristics

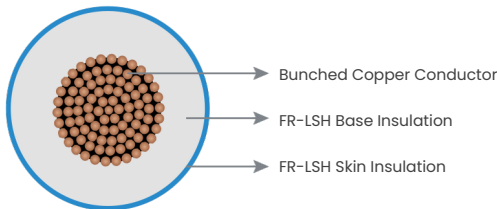
Chiwas's FRLS cables are engineered with insulation that combines flame retardant properties and low smoke emissions. During combustion, these cables produce significantly less smoke, which enhances visibility for safe evacuation and supports effective firefighting efforts. Additionally, the reduction of halogen acids and toxic gas emissions fosters a safer environment during fire incidents.

Versatile Applications

These cables are designed for a diverse array of environments, including fire and explosion-prone areas, chemical factories, densely wired spaces, public buildings, educational institutions, healthcare facilities, and commercial complexes. They are particularly well-suited for modern residences that accommodate multiple high-power electrical appliances, high-rise buildings, commercial spaces, public venues, schools, and hospitals.

TECHNICAL DATA

Nominal Voltage (U0/U)	: 600/1100 V
Max Operating Temperature	: 700C
Temperature Range	: -150C to + 700C
Approvals	: IS 8130:2013
Flammability	: IEC 60332 - 1:2004
Minimum Bending Radius	: 8D
Oxygen Index	:Minimum 28%
Temperature Index	:Minimum 2400C
Smoke Density Rating	:Maximum 50%
Acid Gas Generation (HCL %)	:Maximum 15%



SINGLE CORE UNSHEATHED PVC INSULATION COPPER CONDUCTOR CABLES (CONFIRMING TO IS: 694 - 2010)

Area (mm)	No./size of Wire Nominal diameter (mm)	Nominal Thickness of Insulation (mm)	Approx Overall Diameter (mm)	Max DC Resistance @ 20° C (Ohm/Km)	Current Rating 2 Cable (Single Phase) (AC/DC Amp)
1	14/0.3	0.6	2.7	18.10	13
1.5	22/0.3	0.7	3.0	12.10	16
2.5	36/0.3	0.8	3.6	7.41	22
4	56/0.3	0.8	4.1	4.95	29
6	84/0.3	0.8	4.7	3.30	37
10	140/0.3	1.0	6.2	1.91	51
16	126/0.4	1.0	7.3	1.21	69



COLOUR: RED, YELLOW, BLUE, BLACK, GREEN & WHITE

ZERO HALOGEN FLAME RETARDANT (ZHFR)

Chiwas ZHFR Cables: Unmatched Safety with Zero Halogen Flame Retardant Technology

Chiwas presents its Zero Halogen Flame Retardant (ZHFR) cables, crafted to enhance safety standards and redefine dependability. Featuring premium imported ZHFR insulation, Chiwas's ZHFR cables guarantee emission-free performance during a fire, providing the highest level of safety for a variety of settings.

Enchanted Highlights of Chiwas ZHFR Cables

Zero Halogen Flame Retardant Insulation

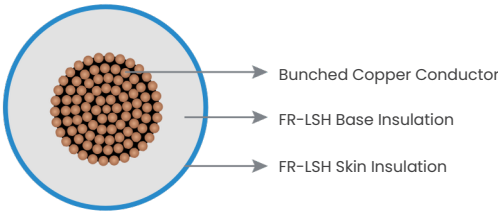
Crafted from premium-grade imported ZHFR insulation, Chiwas cables guarantee the complete absence of harmful halogen gases and smoke during fire events. This groundbreaking feature significantly boosts safety, making these cables an excellent option for essential environments such as residential and commercial buildings, metro railways, chemical and nuclear facilities, high-security sites, and defense establishments.

Unmatched Safety Assurance

Chiwas ZHFR cables provide a safety level that exceeds conventional standards, preventing the emission of toxic gases and smoke, thereby helping to protect human life and property.

TECHNICAL DATA

Nominal Voltage (U0/U)	: 600/1100 V
Max Operating Temperature	: 700c
Temperature Range	: -150C to + 700C
Flammability	: IEC 60332 - 1:2004
Minimum Bending Radius	: 8D
Acid Gas Generation (HCL %)	: 0.5 %
Oxygen Index	: Minimum 29 %
Temperature Index	: Minimum 2500C



**SINGLE CORE INSULATED UNSHEATHED 1100 VOLTS, COPPER CONDUCTOR CABLE
(AS PER IS: 694 – 2010)**

Area (mm)	No./size of Wire Nominal diameter (mm)	Nominal Thickness of Insulation (mm)	Approx Overall Diameter (mm)	Max DC Resistance @ 20° C (Ohm/Km)	Current Rating 2 Cable (Single Phase) (AC/DC Amp)
1	14/0.3	0.6	2.7	18.10	13
1.5	22/0.3	0.7	3.0	12.10	16
2.5	36/0.3	0.8	3.6	7.41	22
4	56/0.3	0.8	4.1	4.95	29
6	84/0.3	0.8	4.7	3.30	37



COLOUR: RED, YELLOW, BLUE, BLACK, GREEN & WHITE

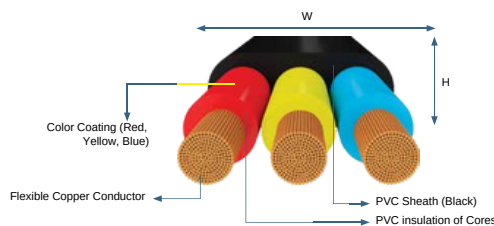
3 CORE FLAT SUBMERSIBLE CABLES



3 CORE FLAT CABLES FOR SUBMERSIBLE PUMP MOTORS

CHI WAS 3 Core Flat Cables are manufactured for critical space requirement, protection against indefinite immersion in water under specified conditions, protection against rain-water and against ingress of small solid foreign bodies.

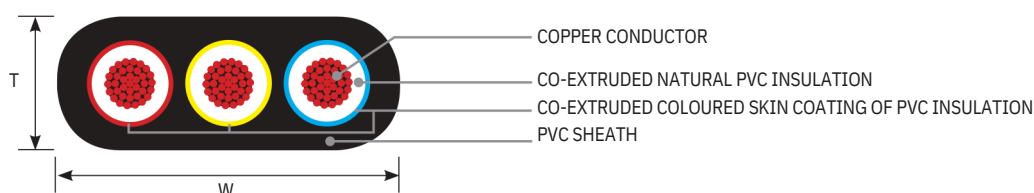
CHI WAS 3 Core Flat Cables are produced from best quality electrolytic copper, which is drawn, annealed on-line and bunched on automatic machines to ensure flexibility and uniform resistance. The conductors are insulated with a special grade of PVC on sophisticated co-extrusion lines. Outer sheath consists of highly abrasion resistant PVC compound impervious to grease, oil and water etc.



CHI WAS – 3 Core Flat Cables (as per IS 694 ISI marked)

Conductor		Insulation	Sheath		Conductor Resistance @ 20° C (Max.) Ohms/km	Current Carrying Capacity @40° C Amps
Area (Nom.) Sq. mm	No/dia. of strands mm	Thickness (Nom.) mm	Overall dimensions			
			Thickness (Nom.) mm	Size (Approx.) (W x T) mm		
1.5	22/0.3	0.8	1.1	11.6 x 5.5	12.10	16
2.5	36/0.3	0.9	1.2	13.9 x 6.4	7.41	22
4.0	56/0.3	1	1.3	16.1 x 7.1	4.95	29

Note : Insulation thickness, Sheath thickness and Overall Dimensions given in this table are nominal values. The strand diameter is nominal. However, Construction of the conductor is designed to satisfy the requirement of conductor resistance.



CHI WAS – 3 Core Flat Cables (as per IS 694 ISI marked)

Conductor		Insulation	Sheath		Conductor Resistance @ 20° C (Max.) Ohms/km	Current Carrying Capacity @40° C Amps
Area (Nom.) Sq. mm	No/dia. of strands mm	Thickness (Nom.) mm	Overall dimensions			
			Thickness (Nom.) mm	Size (Approx.) (W x T) mm		
6	84/0.3	1.1	1.4	18.6 x 8.0	3.30	37
10	80/0.4	1.3	1.6	23.4 x 10.0	1.91	51
16	126/0.4	1.4	1.8	27.0 x 11.4	1.21	68
25	196/0.4	2	2.2	35.4 x 15.0	0.78	86
35	276/0.4	2.1	2.2	39.3 x 16.3	0.554	110
50	396/0.4	2.2	2.4	45.7 x 18.5	0.386	145

Note : 3 Core x 70 sq. mm & 3 Core x 95 sq. mm Flat Cables are available on request

CHI WAS – 3 Core Flat Cables (as per IS 694 - ISI marked)

'Chiwas 3 Core Flat Cables are having the same features of Chiwas Submersible Cables as given above. These are having minimum insulation and sheathing thicknesses as specified in the IS 694 : 1990.

Conductor		Insulation		Sheath		Conductor Resistance @ 20° C (Max.) Ohms/km	Current Carrying Capacity @40° C Amps
Area (Nom.) Sq. mm	No/dia. of strands mm	Thickness (Nom.) mm	Core dia. (Nom.) mm	Overall dimensions			
				Thickness (Nom.) mm	Size (Approx.) (W x T) mm		
1.5	22/0.3	0.6	2.8	0.9	11.0 x 5.0	12.10	16
2.5	36/0.3	0.7	3.4	1.0	13.0 x 6.0	7.41	22
4.0	56/0.3	0.8	4.1	1.0	15.3 x 6.7	4.95	29

LT/HT Power & Control Cables



XLPE Cables

XLPE insulated heavy duty cables were introduced worldwide in mid-sixties. These cables have overcome the limitations of PVC insulated cables such as thermal degradation, poor moisture resistance and thermoplastic nature. The advantages of XLPE insulated cables in comparison to PVC insulated cables are as under



LT Cables

Power Cables are principally used for power transmission and distribution systems (overhead, underground and submarine) in the power and other industries. We manufacture a range of cables with high to low voltage and different Sheathings such as PVC, XLPE, flame retardant and low smoke. The main structural components of power cables include conductor, insulation and sheath.

ALUMINIUM CONDUCTOR - POWER CABLES

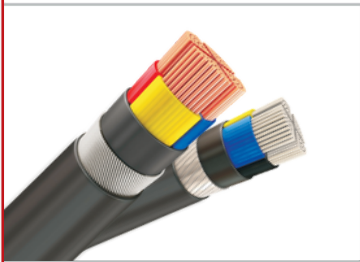
Nom. Area of Con- ductor	CURRENT RATING IN GROUND AT 30°C									CURRENT RATING IN AIR AT 40°C									SHORT CIRCUIT RATING		
	1 C PVC A	2 C PVC A	3C, 3.5C, 4C PVC A	1 C PVC C	2 C PVC C	3C, 3.5C, 4C PVC C	1 C XLPE	2 C XLPE	3C, 3.5C, 4C XLPE	1 C PVC A	2 C PVC A	3C, 3.5C, 4C PVC A	1 C PVC C	2 C PVC C	3C, 3.5C, 4C PVC C	1 C XLPE	2 C XLPE	3C, 3.5C, 4C XLPE	PVC A	PVC C	XLPE
6	39	40	35	44	46	40	44	50	43	35	35	30	42	42	36	39	44	50	0.456	0.414	0.564
10	51	55	46	58	63	52	59	69	57	47	47	40	56	56	48	53	59	67	0.760	0.690	0.940
16	66	70	60	75	80	68	76	88	73	64	59	51	77	71	61	73	74	70	1.22	1.10	1.50
25	86	90	76	98	103	87	96	112	94	84	78	70	101	94	84	98	98	96	1.90	1.73	2.35
35	100	110	92	114	125	105	114	138	113	105	99	86	126	119	103	121	124	117	2.66	2.42	3.29
50	120	135	110	137	154	125	135	169	133	130	125	105	156	150	126	150	156	142	3.80	3.45	4.70
70	140	160	135	160	182	154	166	200	164	155	150	130	186	180	156	187	188	179	5.32	4.83	6.58
95	175	190	165	200	217	188	198	238	196	190	185	155	228	222	186	230	231	221	7.22	6.56	8.93
120	195	210	185	222	239	211	225	262	223	220	210	180	264	252	216	268	262	257	9.12	8.28	11.28
150	220	240	210	251	274	239	253	300	249	250	240	205	300	288	246	309	300	292	11.40	10.35	14.10
185	240	275	235	274	314	268	286	344	282	290	275	240	348	330	288	360	344	337	14.06	12.77	17.39
240	270	320	275	308	365	314	332	400	326	335	325	280	402	390	336	433	406	399	18.24	16.56	22.56
300	295	355	305	336	405	348	376	444	367	380	365	315	456	438	378	501	456	455	22.80	20.70	28.20
400	325	385	335	371	439	382	431	481	418	435	420	375	522	504	450	596	525	530	30.40	27.60	37.60
500	345	410	350	393	467	399	490	523	470	480	450	410	576	540	492	693	678	612	38.00	34.50	47.00
630	390			445			557	592	529	550			660			814	786	707	47.88	43.47	59.22
800	440			502			600			640			768			890			60.80	55.20	75.20
1000	490			559			650			720			864			1050			76.00	69.00	94.00

COPPER CONDUCTOR - POWER CABLES

Nom. Area of Con- ductor	CURRENT RATING IN GROUND AT 30°C									CURRENT RATING IN AIR AT 40°C									SHORT CIRCUIT RATING		
	1 C PVC A	2 C PVC A	3C, 3.5C, 4C PVC A	1 C PVC C	2 C PVC C	3C, 3.5C, 4C PVC C	1 C XLPE	2 C XLPE	3C, 3.5C, 4C XLPE	1 C PVC A	2 C PVC A	3C, 3.5C, 4C PVC A	1 C PVC C	2 C PVC C	3C, 3.5C, 4C PVC C	1 C XLPE	2 C XLPE	3C, 3.5C, 4C XLPE	PVC A	PVC C	XLPE
4	39	41	36	44	47	41	47	51	43	35	35	30	42	42	36	42	44	36	0.460	0.416	0.572
6	49	50	45	56	57	51	59	63	54	44	45	39	52.8	54	46.8	53	56	47	0.690	0.624	0.858
10	65	70	60	74	80	68	78	88	72	60	60	52	72	72	62.4	72	75	62	1.15	1.04	1.43
16	85	90	77	97	103	88	102	113	92	82	78	66	98.4	93.6	79.2	98	98	79	1.84	1.66	2.29
25	110	115	99	125	131	113	132	144	119	110	105	90	132	126	108	132	131	108	2.88	2.60	3.58
35	130	140	120	148	160	137	156	175	144	130	125	110	156	150	132	156	150	132	4.03	3.64	5.01
50	155	165	145	177	188	165	186	206	174	165	155	135	198	186	162	198	194	162	5.75	5.20	7.15
70	190	205	175	217	234	200	228	256	210	205	195	165	246	234	198	246	244	198	8.05	7.28	10.01
95	220	240	210	251	274	239	264	300	252	245	230	200	294	276	240	294	288	240	10.93	9.88	13.59
120	250	275	240	285	314	274	300	344	288	280	265	230	336	318	276	336	331	276	13.80	12.48	17.16
150	280	310	270	319	353	308	336	388	324	320	305	265	384	366	318	384	381	318	17.25	15.60	21.45
185	305	350	300	348	399	342	366	438	360	370	350	305	444	420	366	444	438	366	21.28	19.24	26.46
240	345	405	345	393	462	393	414	506	414	425	410	355	510	492	426	510	512	426	27.60	24.96	34.32
300	375	450	385	428	513	439	450	562	462	475	465	400	570	558	480	570	581	480	34.50	31.20	42.90
400	400	490	425	456	559	485	480	612	510	550	530	455	660	636	546	660	662	546	46.00	41.60	57.20
500	425			485			564			590			708			708			57.50	52.00	71.50
630	470			536			570			660			792			825			72.45	65.52	90.09
800							660									945			92.00	83.20	114.40
1000							723									1063			115.00	104.00	143.00

Product Range

POWER CABLES



Application: Power Distribution for Industrial, commercial, institutional and residential purposes.

Types and Sizes: From Single core up to 4 core - Ranging from 4mm² to 1200mm²

Conductor: Aluminium - Solid, Stranded (Sector/Circular) or Copper - Solid, Stranded (Sector/Circular) or Flexible

Insulation: PVC - Type A, Type C, Polyethylene, XLPE, ZHFR, LSZH

Inner Sheath: PVC - ST1, HR, FR, FRLS, LSZH

Armour: Galvanized Steel or Aluminium Wire / Strip / Tape

Outer Sheath: PVC - ST1, HR, FR, FRLS, LSZH, XLPO

Specification: IS: 1554 (Pt-1 & 2), IS: 7098 (Pt-1 & 2) IEC: 60502-1, BS: 5467, BS: 6396

Application: Suitable for connections for Control Circuits Communication Systems, Electrical Panels, Machine Tools, etc. Also used for lighting at lower loads.

Types and Sizes: Upto 61 cores, from 1.0 mm² to 2.5 mm²

Conductor: Copper - Solid, Stranded (Circular) or Flexible - Bare or Tinned

Insulation: PVC - Type A, Type C, Polyethylene, XLPE

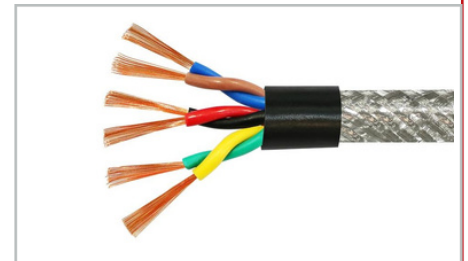
Inner Sheath: PVC - ST1, HR, FR, FRLS, LSZH

Armour: Galvanized Steel Wire / Strip / Tape

Outer Sheath: PVC - ST1, HR, FR, FRLS, LSZH

Specification: IS: 1554 (Pt-I), IS: 7098 (Pt-I), IEC: 60502-1, BS: 5467, BS: 6346

CONTROL CABLES



INSTRUMENTATION CABLES



Application: Widely used in measurement, communication and data acquisition systems. Also used in microprocessor based/computerised instrumentation system. Designed to transmit without interference.

Types and Sizes: Upto 50 Pairs, Triads from 0.5 mm² to 1.5 mm²

Conductor: Copper - Solid, Stranded (Circular) or Flexible - Bare or Tinned

Insulation: PVC - Type A, Type C, Polyethylene, XLPE

Shielding: Aluminium - Mylar Braiding

Inner Sheath: PVC - ST1, HR, FR, FRLS, LSZH

Armour: Galvanized Steel Wire / Strip / Tape / Braid

Outer Sheath: PVC - ST1, HR, FR, FRLS, LSZH

Specification: IS:1554 (Pt-1), BS: 5308 (Pt-1 & 2), IEC: 189 (Pt 1 & 2), VDE: 0815 & 0816, BS EN: 50288

Application: Used in locations where high resistance to heat, oil and fire (HOFR) are required. Commonly used in lifts, cranes, pumps and other heavy duty equipment.

Types and Sizes: Single core & multi core - 0.5 mm² to 630 mm²

Conductor: Flexible Tinned Copper Conductor

Insulation: EPR, CSP, PCP, Silicone Rubber

Inner Sheath: EPR, CSP, PCP, Silicon Rubber

Armour: Copper Wire / Stainless Steel Braiding

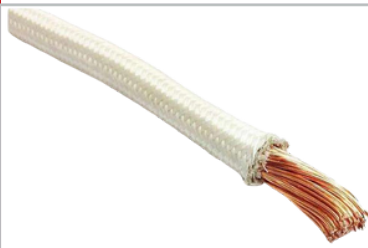
Outer Sheath: EPR, CSP, PCP, Silicone Rubber

Specification: IS: 9968 (Pt-1 & 2), BS: 6500, BS: 7919, BS EN: 60332, IEC: 60502

RUBBER CABLES



HIGH TEMPERATURE CABLES



Application: Steel, Chemical and Metallurgical industry, aircraft & aerospace vehicle wiring, nuclear power plants, oil exploration & oil rigs, military & defence equipments, auto wiring etc.

Conductor: Bare / Tinned copper (up to 120° C), Silver plated copper (up to 200° C), Nickel plated conductor (up to 260° C).

Insulation: Special compounds used for cables to work upto 350° C

Screening: Individual and/ or overall with Aluminium Mylar tape with tinned copper drain wire / or Braided with bare / tinned / nickel plated / silver plated copper wire.

Armouring: Galvanized steel wire / stainless steel wire.

Specification: IS:8130, IEC: 60228, VDE:0295

SOLAR CABLES

Application: Used for interconnections between solar panels and other electrical components. These are designed to be UV resistant and weather resistant

Types and Sizes: Typically Single or Double core, from 2.5 mm² to 50 mm²

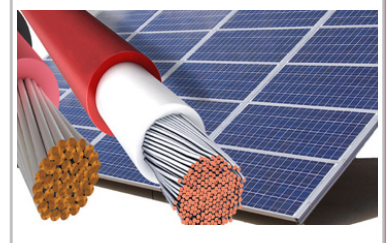
Conductor: Stranded / Flexible Tinned Copper Conductor

Insulation: TPE, XLPO, Ultraviolet - Resistant PVC

Separator: Paper Tape

Outer Sheath: Ultraviolet - Resistant PVC

Specifications: UL Type PV-UL 4703, TUV 2 pfg 1169/08.2007



CONCENTRIC CABLES



Application: Indoor, outdoor and underground installation in ducts. Used for better mechanical protection and higher resistance to fire and toxic fumes

Conductor: Solid / Stranded Bare Copper / Aluminium Conductor

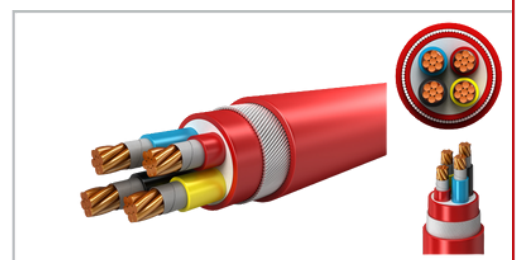
Insulation: PVC- Type A, XLPE, FR, LSZH

Armour: Concentric Copper / Aluminium Conductor / Copper / Aluminium Tape

Outer Sheath: FR, FRLS, LSZH, ZHFR

Specification: BS: 7870, DKS: 1022, Customer Specifications

FIRE SURVIVAL CABLES



Application: Designed to maintain circuit integrity during fire. Typically used in fire alarm systems, emergency lighting, critical circuits and other safety equipment.

Types and Sizes: S/CX16 to 1200 sq. mm Multicore 16 to 400 sq. mm

Conductor: Bare / Tinned Copper, Aluminium - Solid, Stranded or Flexible

Fire Barrier: Layers of Glass Mica Tape

Insulation: Heat Resistant PVC, XLPE, Silicon Rubber with Additional taping or screening if required

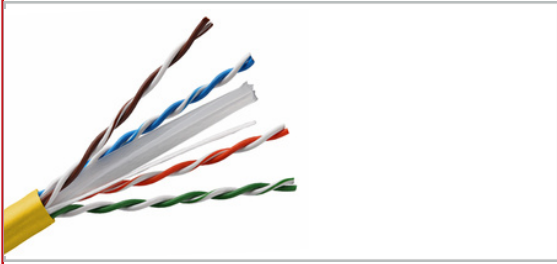
Inner Sheath: FR PVC, FRLS PVC, ZHFR, LSZH

Armouring: Galvanised Steel Wire / Strip

Outer Sheath: FR PVC, FRLS PVC, ZHFR

Specification: BS: 7846 or equivalent BS: 6387 Category CWZ, IEC: 6033, Customer Specifications

CAT-6 UTP CABLES



Category: 6 UTP Solid cable

Conductor Meta : Conductor Meta : Bare Copper

OD : 6.1mm ±0.2

Capacitance Unbalance : 330pF/100m

Conductor : Conductor : 23 AWG (Solid)

Insulation Material : HD-PE

Resistance Unbalance : 5% Max

Delay Skew : <45nS

Application: Used for transmission of radio frequency signal and for connections to systems in local area networks (LAN), cable televisions, PICC Communication etc.

Construction Details: Typically solid copper conductor. Stranded /Flexible conductor is also available

Types and Sizes: Usually manufactured for Impedance of 50 to 125 W

Insulation: Polyethylene, Cellular PE, Foam PE

Shielding: Aluminium - Mylar / Copper / Steel Braiding

Outer Sheath: PVC-ST1, HR, FRLS, PE

Specification: Radio Guide and Military MIL-C-17, IS:11967, BS:2316 & Customer Specifications.

COAXIAL CABLES



WIND CABLES



Power Cable: For transmitting power from the generator mounted in the nacelle of the wind tower to base station. Flexible cables made of special elastomeric compounds to meet torsional stresses exerted to rotation of the nacelle in relation to wind direction.

Conductor: Flexible class-5 tinned or bare copper conductors, made to IEC-60228/IS-8130

Range (single cover): 10 Sq mm to 300 Sq mm

Insulation: EPR

Sheath: Special elastomer compound with Oil, Fire, Hydrolysis and Torsion Resistant properties. (Zero halogen sheath available upon request)

Control & Instrumentation Cable: For used in Wind Energy applications such as rotor blade pitch control, Yaw control, Top box, Anemometer feed back, Remote data logging etc. Construction as per Customer's requirement and conforming to various National/International Standards.

Application: Used in all railway applications including light switching, track changing and communication.

Types and Sizes: Screened / Unscreened upto 61 Cores

Conductor: Solid Circular Conductor

Insulation: PVC with IRS Properties

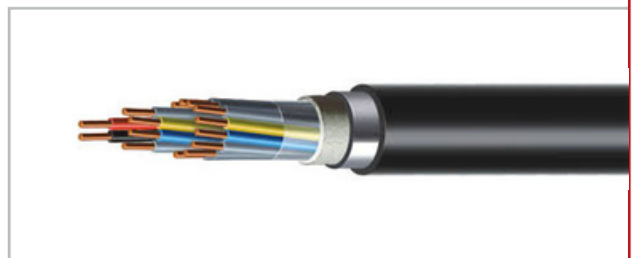
Inner Sheath: PVC

Armour: Galvanised Wire or Strip / Double Steel Tape

Outer Sheath: PVC with IRS properties

Specifications: Indian Railway Specifications: S-63/2014 with upto date amendments

RAILWAY SIGNALLING CABLES



OVERHEAD CONDUCTORS



Application: Transmission & Distribution Overhead Power Lines

Conductor: Stranded Aluminium, Aluminium Alloy

Specification: IS 398, BS EN 50182, IEC 61089, DIN 48201

(1) **AAC:** All Aluminum Conductor

(2) **ACSR:** Aluminum Conductor Steel Reinforced

(3) **AAAC:** All Aluminum Alloy Conductor

(3) **ACAR:** Aluminum Conductor Alloy Reinforced

(4) **ACSR/AW:** Aluminum Conductor Steel Reinforced/Aluminium Clad Steel Core

(5) **AACSR:** All Aluminum Conductor Steel Reinforced

(6) **AACSR/AW:** All Aluminum Conductor Steel Reinforced/Aluminium Clad Steel Core

(7) **Special Conductors:** GAP, INVAR, ACCC

AERIAL BUNCHED CABLES

Application: Typically used in over-head power transmission & distribution and in temporary installations

Conductor: Aluminium Circular Phase Conductors

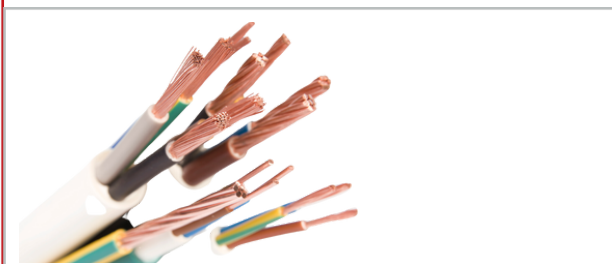
Messenger: Aluminium Alloy or Galvanized Steel Messenger Conductor.

Insulation: Polyethylene, XLPE, HDPE

Specification: IS: 14255, IS: 398, IEC 228, BS: 60502, HD: 626, NFC: 33-209



HOUSE/BUILDING/INDUSTRIAL WIRE/FLEXIBLE CABLES



Application: Residential and Commercial Buildings, Multiplexes, Institutional & Industrial applications

Conductor: Copper - Solid/Stranded (Circular) or Flexible-Bare or Tinned, 0.5 to 240 sq mm.

Insulation: Natural PVC, HR-PVC, FR, FRLS, LSZH

Outer Sheath: Skin Colour PVC, FR, FRLS

Specifications: IS: 694, BS: 6004, 6500, BS:7211, IEC 60227

FLAT & SUBMERSIBLE CABLE

Application: Temporary Connections, Wiring Submersible Pumps

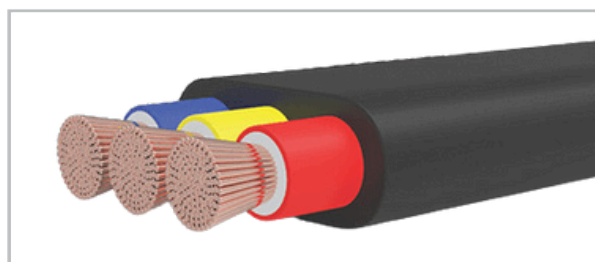
Conductor: Copper - Stranded (Circular) or Flexible - Bare or Tinned

Insulation: PVC, HR PVC

Inner Sheath: PVC, HR PVC

Outer Sheath: PVC, HR PVC

Specification: IS: 694, BS: 6004/6500, BS EN: 60228, BS: 7211



Wide Product Range

- Single core & multicore cable
- FR/FR-LSH/HR-FR-LSH/LSZH
- 0.5 sqmm to 400 sqmm

Leading Features

- Smooth & Glossy Surface • High Insulation Resistance • High Abrasion Resistance • Heat Resistance • Smooth Surface • Extra Flexible

CONTROL CABLES

No. of Cores	CURRENT RATING IN GROUND AT 30°C						CURRENT RATING IN AIR AT 40°C						SHORT CIRCUIT RATING					
	1.5 PVC A	1.5 PVC C	1.5 XLPE	2.5 PVC A	2.5 PVC C	2.5 XLPE	1.5 PVC A	1.5 PVC C	1.5 XLPE	2.5 PVC A	2.5 PVC C	2.5 XLPE	1.5 PVC A	1.5 PVC C	1.5 XLPE	2.5 PVC A	2.5 PVC C	2.5 XLPE
2	23	26	33	32	36	39	20	24	29	27	32	32	0.173	0.156	0.215	0.288	0.260	0.358
3	21	24	25	27	31	34	17	20	22	24	29	30	0.173	0.156	0.215	0.288	0.260	0.358
4	21	24	25	27	31	34	17	20	22	24	29	30	0.173	0.156	0.215	0.288	0.260	0.358
5	21	24	24	27	31	31	17	20	21	24	29	28	0.173	0.156	0.215	0.288	0.260	0.358
6	15	17	22	20	23	29	13	16	19	18	22	26	0.173	0.156	0.215	0.288	0.260	0.358
7	14	16	21	20	23	27	13	16	18	17	20	25	0.173	0.156	0.215	0.288	0.260	0.358
10	13	15	18	18	21	24	11	13	16	15	18	21	0.173	0.156	0.215	0.288	0.260	0.358
12	12	14	17	17	19	22	10	12	15	14	17	20	0.173	0.156	0.215	0.288	0.260	0.358
14	11	13	16	16	18	21	10	12	14	13	16	19	0.173	0.156	0.215	0.288	0.260	0.358
16	11	13	16	15	17	20	9	11	14	13	16	18	0.173	0.156	0.215	0.288	0.260	0.358
19	10	11	15	14	16	19	9	11	13	12	14	17	0.173	0.156	0.215	0.288	0.260	0.358
24	9	10	13	13	15	17	8	10	12	11	13	16	0.173	0.156	0.215	0.288	0.260	0.358
30	9	10	12	12	14	16	7	8	11	10	12	14	0.173	0.156	0.215	0.288	0.260	0.358
37	8	9	11	11	13	15	7	8	10	10	12	14	0.173	0.156	0.215	0.288	0.260	0.358
61	7	8	9	9	10	12	6	7	8	8	10	11	0.173	0.156	0.215	0.288	0.260	0.358

VARIATION IN AMBIENT TEMPERATURE (AIR)

AMBIENT TEMP	15	20	25	30	35	40	45	50	55
PVC	-	1.32	1.25	1.16	1.09	1	0.9	0.8	0.69
XLPE	-	1.18	1.14	1.1	1.05	1	0.95	0.89	0.84

VARIATION IN AMBIENT TEMPERATURE (GROUND)

AMBIENT TEMP	15	20	25	30	35	40	45	50	55
PVC	1.17	1.12	1.06	1	0.94	0.87	0.79	0.71	-
XLPE	1.12	1.08	1.04	1	0.96	0.92	0.86	0.82	-

RATING FACTOR FOR DEPTH OF LAYING (CABLES LAID DIRECT IN GROUND)

DEPTH OF LAYING	SIZE OF CABLE		
CM	UP TO 25 MM ²	25 MM ² to 300 MM ²	ABOVE 300 MM ²
75	1.00	1.00	1.00
90	0.99	0.98	0.97
105	0.98	0.97	0.96
150	0.97	0.96	0.95
120	0.96	0.94	0.92
180 or More	0.95	0.93	0.91

Chiwas Solar cables connect photovoltaic power supply systems, handling a nominal D.C. voltage of 1.1kV. Suitable for both indoor and outdoor use, they offer high mechanical strength for flexible and fixed installations in extreme weather. These cables are built to endure harsh environmental conditions in various photovoltaic setups.

- PURE PVC INSULATION

Crafted from the finest, superior-grade PVC resin and carefully selected compounding ingredients, our in-house, specially formulated PVC compound is tailored for each type of cable. This meticulous creation boasts heightened insulation resistance, impressive thermal stability, and remarkable fire-retarding properties. The purity within this compound guarantees safety, reliability, and an extended lifespan for your Wires.

- PURE COPPER - THE ULTIMATE IN PURITY

At the heart of Ultra Wires lies the highest purity Electrolytic Grade Copper, in stark contrast to the lower-grade copper commonly utilized in standard cables, which often results in subpar conductivity. With conductivity exceeding 100% according to the International Annealed Copper Standard (IACS), our cables minimize energy losses, leading to reduced power bills.





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WIRES & CABLES

