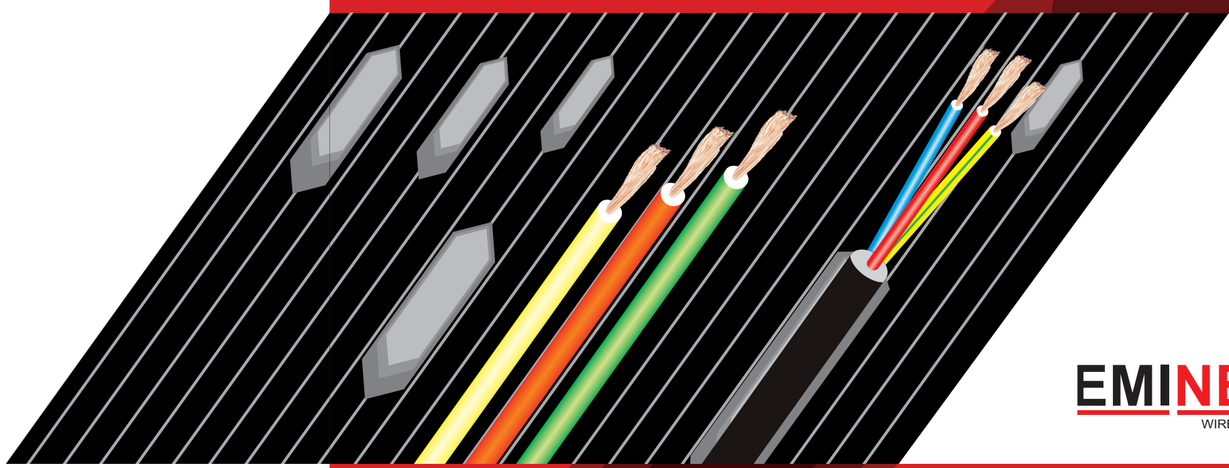
Single & Multi Core Cables



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MAGNI TECH SPECIALITY CABLES PVT. LTD.

EMINENT™

WIRES AND CABLES

Magni Tech Speciality Cables Pvt. Ltd.

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Eminent™ **Control Flex®** **Distronic®**

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Introduction:

Magni tech speciality cables pvt. Ltd. is one of the leading manufacturers of cable & wires in India. The company has invested heavily in the manufacturing infrastructure and **is** using state of the art technology to produce the best quality wire & cables to ensure high productivity and enhanced process control. The company produces various types of cables using the most modern technology**,** high - tech equipments and best raw materials. A team of skilled and experienced professionals are dedicated for continuous research to keep in pace with the ever advancing technology.

Our products are highly functional and innovative, designed with respect to on site working conditions, fire resistance and environmental factors. Our conductors are manufactured in geometrical formation to ensure stable and uniform shape, resulting into uniform insulation. This elements possibility of current leakage even after ageing. Our equipment has one line quality check/ correction that ensure 100 % faultless output, consistent quality and repeatable test results. It also ensures optimum conductivity of the conductor and stress - free insulation. Our insulating and sheathing compound are specially formulated to give glossy surface to have optimum life of the plastic and avoid brittleness after ageing. Our cables are designed to suit the application and customer equipment on safety, savings and performance, as our products are manufactured meeting the requirement meeting the requirement of international

Standard IEC 60228.

Since our company complies ISO 9001 standard it becomes imperative to ensure the best quality products to our customers within the country and in global market.

We are continuously working towards making our customers delighted with our services and product quality.

Achievement:

We have manufacture of all types of low voltage 600/1100**V** Control cable & Power Cables

PVC/XLPE insulation. We have manufacturing capacity to produce Multi Core cable up to 630

High Insulation Cables - FR/FRLS/ZHFR

Salient Features :

- Uniform Insulation cuts chance of short circuit making it the safest wire
- Lower conductor resistance values, resulting in recurrent 'Saving in Electricity Bill'
- Low heat generation ensuring safely and enhanced life of insulation

Conductor :

Our process has been specially designed to ensure conductors with geometry and a stable profiles. As a result the insulation is uniform. Even when stripped off insulation, the wires remain intact in a bunch (more like solid) allowing ease in connection, elimination of loose contacts and localized heating at connectors. this property has been attained keeping the resistance value at lower level resulting in recurring power saving

Insulation :

Dual layer insulation is provided which improves the dielectric strength and insulation resistance of the wires and eliminates leakage currents resulting in enhanced safety

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FR (Flame Retardant) PVC Insulated Wires & Cables

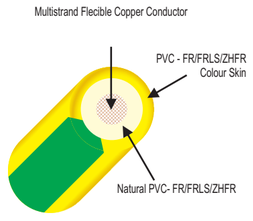
Eminent Flame Retardant Cables are made of Electrolytic grade, bright plain annealed copper conductor, as per IS: 8130-1984. These cables are suitable for all industrial & domestic wiring application.

The cable have a high oxygen and temperature index and are insulated with a Flame Retardant- FR PVC compound, giving it additional safety. The cables have twin coating giving it superior insulation. Further the wires have uniform diameter and are available in standard length of 90 meter and 100 meter coils.

Single Core Unsheathed Cables (Flexible) - IS 694:2010 voltage grade up to 1100V

Area (sq. mm)	Approximate No. of wire/ Nominal wire Diameter No. /mm	Insulation Thickness (Nom.) mm	Insulation Diameter (Approx.) mm	Conductor Resistance @ 20°C (Max.) Ohm/Km	Safe Current Carrying Capacity 2 wires, Single Phase		REMARKS
					In conduit/ Truncking (Amp.)	Unenclosed clipped directly to a surface or cable tray (Amp.)	
0.5	16/0.20	0.6	2.3	39.0	4	4.5	Note : The Strand diameter is nominal, However construction of conductor is designed to satisfy the requirements of conductor resistance as per IS 8130:1984 Insulation thickness given is nominal and overall Diameter is approximate.
0.75	24/0.20	0.6	2.5	26.0	7	8	
1.0	32/0.20	0.6	2.8	19.5	11	12	
1.5	37/0.230	0.6	3.1	13.3	13	16	
2.5	61/0.230	0.7	3.8	7.98	18	22	
4.0	61/0.288	0.8	4.4	4.95	24	29	
6.0	91/0.288	0.8	5.0	3.30	31	37	
10	91/0.376	1.0	6.5	1.91	42	51	
16	144/0.376	1.0	7.8	1.21	57	68	
25	196/0.40	1.2	11.0	0.78	71	86	
35	276/0.40	1.2	12.5	0.554	91	100	
50	396/0.40	1.4	14.5	0.386	120	145	
70	360/0.50	1.4	15.0	0.272	-	214	
95	475/0.50	1.6	17.5	0.206	-	260	
120	608/0.50	1.6	19.0	0.161	-	305	
150	750/0.50	1.8	22.0	0.129	-	355	

Working Voltage	1100V
Operating Temperature Range	-15°C To +70°C
Specification	IS:694
Colour	Red, Yellow, Brown, Black, White, Green, Yellow with Green Stripe
Marketing	Wires are Ink Jet Printed with sequential meter marking along with related details.
Packing	90 Mtrs (approx. 100 yards) coil packed in protective cartons, Jumbo coils in wrap packing are also available to help reduce wastage at the time of installation
Typical Application	Power writing for electrical appliances, wiring in areas close to LPG such as kitchens, factories, Industrial lightings



Multi Core Flexible cable - Is 694:2010 voltage grade up to 1100V

	AREA (sq, mm)	0.5	0.75	1.0	1.5	2.5	4.0	6.0	10
Conductor	No. & Size of Wire (Nom.) mm	16/0.20	24/0.20	32/0.20	37/0.230	61/0.230	61/0.288	91/0.288	91/0.376
	Max Resistance @ 20°C Ohm/Km	39.0	26.0	19.5	13.3	7.98	4.95	3.30	1.91
Insulation	Current Rating (Amps)	4	7	12	15	20	27	35	46
	Thickness (Nom.) mm	0.6	0.6	0.6	0.6	0.7	0.8	0.8	1.0
2 Core	Sheath Thickness (Nom.) mm	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.3
	Overall Diameter (Approx.) mm	6.5	6.9	7.3	7.9	9.6	11.1	13.0	15.5
3 Core	Sheath Thickness (Nom.) mm	0.9	0.9	0.9	0.9	1.0	1.0	1.2	1.4
	Overall Diameter (Approx.) mm	6.9	7.4	7.7	8.4	10.1	11.8	13.8	16.5
4 Core	Sheath Thickness (Nom.) mm	0.9	0.9	0.9	1.0	1.0	1.0	1.2	1.4
	Overall Diameter (Approx.) mm	7.4	7.9	8.3	9.2	10.9	12.7	15.1	17.8
5 Core	Sheath Thickness (Nom.) mm	0.9	0.9	1.0	1.0	1.0	1.1		
	Overall Diameter (Approx.) mm	8.3	9.0	9.5	10.2	11.9	14.2		
6 Core	Sheath Thickness (Nom.) mm	0.9	1.0	1.0	1.0	1.0	1.1		
	Overall Diameter (Approx.) mm	8.6	9.2	9.9	10.8	12.8	15.3		
7 Core	Sheath Thickness (Nom.) mm	0.9	10.	1.0	1.0	1.1			
	Overall Diameter (Approx.) mm	8.5	9.2	10	10.8	13.0			
8 Core	Sheath Thickness (Nom.) mm	1.0	1.0	1.0	1.1	1.2			
	Overall Diameter (Approx.) mm	9.5	10.5	11.0	12.0	14.5			
10 Core	Sheath Thickness (Nom.) mm	1.0	1.1	1.1	1.1	1.3			
	Overall Diameter (Approx.) mm	11.0	12.0	13.2	14.2	16.8			
12 Core	Sheath Thickness (Nom.) mm	1.0	1.1	1.1	1.1	1.3			
	Overall Diameter (Approx.) mm	11.5	12.5	13.3	14.5	17.5			
14 Core	Sheath Thickness (Nom.) mm	1.1	1.1	1.1	1.2	1.3			
	Overall Diameter (Approx.) mm	12.5	13.2	14.0	15.2	18.5			
16 Core	Sheath Thickness (Nom.) mm	1.1	1.2	1.2	1.2	1.4			
	Overall Diameter (Approx.) mm	13.0	14.0	15.0	16.5	19.5			
18 Core	Sheath Thickness (Nom.) mm	1.1	1.2	1.3	1.3	1.4			
	Overall Diameter (Approx.) mm	13.6	15.0	16.0	17.5	20.5			
19 Core	Sheath Thickness (Nom.) mm	1.1	1.2	1.3	1.3	1.4			
	Overall Diameter (Approx.) mm	14.0	15.2	16.2	17.8	21.5			
24 Core	Sheath Thickness (Nom.) mm	1.2	1.3	1.4	1.4	1.5			
	Overall Diameter (Approx.) mm	16	17.5	18.0	20.3	24.5			

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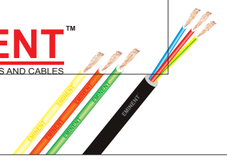

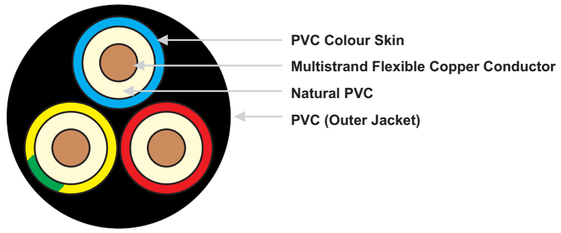

Flame Retardant Properties of FR

Test	Specification	Typical values with EMI-FR
Critical oxygen index	ASTM-D 2863	> 29%
Temperature index	ASTM-D 2863	>250° C.

Flame Retardant Low Smoke Properties of FRLS

Test	Specification	Typical values with EMI- FRLS
Limiting oxygen index	ASTM-D 2863	> 30 %
Temperature index	ASTM-D 2863	> 250 °C.
Smoke density Rating (Light Absorption)	ASTM-D 2843	< 60 %
Halogen Acid gas generation	IEC 754-1	< 20 %

Halogen Free Properties of ZHFR

Test	Specification	Typical values with EMI- HFFR
Limiting oxygen index	ASTM-D 2863	> 30 %
Temperature index	ASTM-D 2863	> 200 °C.
Smoke density Rating	ASTM-D 2843	<10 %
Halogen Acid gas generation	IEC 754-1	<0.5 %

Some Useful Electric Data

Selection Chart for Typical Domestic Loads*

Sr. No.	Items	Load/Wattage	MCB rating	Wire size (sq. mm)
01	Fan	60W	-	1
02	Lamp, Tube light	40W	-	1
03	Room heater	200W	1A	1.5
04	Water Heater			
	8 ltrs	1200-2000W	10A	2.5
	15 ltrs	3080-4000W	20A	4
	60 ltrs	4000-6000W	32A	6
05	Immersion heater	1000W	6A	1.5
06	Hot Plate - single	1000W	6A	1.5
07	Iron - non automatic	500W	3A	1.5
	automatic	1000W	6A	1.5
08	Mixer / Juicer	300W	2A	1.5
09	TV / VCR	200W	1A	1.5
10	Music system	200W	1A	1.5
11	Refrigerator			
	165 ltrs	400W	3A	1.5
	285 ltrs	600W	4A	1.5
	350 ltrs	750W	6A	1.5
12	Toaster	500W	3A	1.5
13	Vacuum Cleaner	400W	3A	1.5
14	Washing machine			
	without heater	300-1300W	10A	2.5
	with heater	5000-6300W	32A	6
15	Water cooler	700W	6A	1.5
16	Desert cooler	300W	2A	1.5
17	Oven	750W	6A	1.5
18	Electric kettle	1500W	7.5A	1.5
19	Air conditioner	1 ton	10A	2.5
		1.5 ton	16A	4
		2 ton	16A	4
20	Hair dryer	1000W	7.5A	1.5
21	Microwave	800W	6A	1.5

The above data is only for guidance and may vary for different manufactures. The proper load of items should be checked for current requirement and appropriate wire and MCB size should be accordingly chosen.

Max. Short Circuit Current as per Transformer kVA*

Transformer Rating	Full Load Current at 415 V	Max. Short Circuit Current	
KVA	A	kA	
4% impedance			5% Impedance
25	35		0.7
40	56		1.1
63	88		1.8
100	139		2.8
125	174		3.5
160	223		4.5
200	278		5.6
250	348		7
315	438		8.8
400	560		11.3
500	695		13.9
630	876		17.5
800	1112		22.2
1000	1390		27.8
1250	1740		34.8
1600	2230		44.6
2000	2780		55.6
2500	3480		69.8

Derating of Wires*

Ambient Temp. °C	30	35	40	45	50
Rating Factor	1.09	1.04	1	0.85	0.77

* Above data is indicative. Magnitech will not be liable for damage arising out of incorrect applications.

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