



# TECHNICAL SPECIFICATIONS OF BUILDING WIRES



**ITP ELECTRONICS PRIVATE LIMITED**

Plot No 27, Electronic City, Sector-18 ,Gurgaon – 122016 (Haryana)

Tel: - +91-124-4013646, 4013647, Fax:- +91-124-239827

**UNIT 2:** Plot No. - 8, Sector – 3, I I E, S I D C U L, Haridwar - 249 403, Uttarakhand (India)

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## Product Features, Application and Technical Specifications:

FLAME RETARDANT(FR) PVC INSULATED, SINGLE CORE, UNSHEATHED, COPPER CONDUCTOR WIRES & CABLES WITH IMPROVED FIRE PERFORMANCE ( C1 ), FOR WORKING VOLTAGES UPTO & INCLUDING 1100 VOLTS



PRODUCT DESCRIPTION	TECHNICAL DETAILS
<ul style="list-style-type: none"> <li>✓ Conductor Material-Multi strand, Annealed, Bare Electrolytic Grade Copper</li> <li>✓ Stranded/Flexible Copper Conductors as per IEC-60228 / IS:-8130</li> <li>✓ Insulation:-FR PVC Compound with Flame Retardant properties as per IS:-5831</li> <li>✓ Single Core - Single / Double layer insulation</li> <li>✓ Standard Colour:-Red, Black ,Blue, Green, Yellow .</li> <li>✓ Standard Length:- 90 mtr in carton box</li> <li>✓ 100 / 180 / 270 mtr in plastic bags</li> <li>✓ <b>RoHS Compliant</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Operating Temperature: -70° C</li> <li>✓ Rated voltage: -Up to &amp; Including 1100 Volts</li> <li>✓ Spark Voltage: - According to insulation thickness , as per IS :-694-2010 (6 KV to 15 KV )</li> <li>✓ Volume Resistivity at 27°C- <math>1 \times 10^{13}</math> Ohm-cm (min)</li> <li>✓ Volume Resistivity at 70°C- <math>1 \times 10^{10}</math> Ohm-cm (min)</li> <li>✓ Critical Oxygen Index -29% (Minimum)</li> <li>✓ Temperature Index – 21% at 250°C (Minimum)</li> </ul>

### APPLICATION:

FR PVC Insulated Wires & Cables are used in Buildings, Schools Hospitals etc.

Also Used in various Industry segments where Improved Fire performance is of utmost requirement .

Product Specifications							
Conductor Construction				Cable			
Nominal Cross section	Diameter of single strand- Max	Conductor Dia Max	Nominal thickness of insulation	Over All Diameter Max	Current carrying capacity # 2 cables, single phase		Conductor Resistance at 20° C - Max
					In conduit / Trunking	Unenclosed-clipped directly to a surface or on cable tray	
sq mm	mm	mm	mm	mm	Amps	Amps	ohm / Km
0.50	0.300	2.75	0.6	2.6	3	4	39.0
0.75	0.200	3.5	0.6	2.8	6	7	26.0
1.00	0.300	4.5	0.7	3.0	11	12	18.10
1.50	0.300	5.6	0.7	3.4	13	16	12.10
2.50	0.300	6.6	0.8	4.1	18	22	7.41
4.00	0.300	8.0	0.8	4.8	24	29	4.95
6.00	0.300	9.5	0.8	5.3	31	37	3.30
10.00	0.300	10.9	1.0	7.0	42	51	1.83
16.00	0.450	12.3	1.0	8.1	57	68	1.15

\* Coil lengths can be supplied as per Customer's requirement also.



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## Product Features, Application and Technical Specifications:

FLAME RETARDANT LOW SMOKE ( FRLS) PVC INSULATED, SINGLE CORE, UNSHEATHED, COPPER CONDUCTOR WIRES WITH IMPROVED FIRE PERFORMANCE ( C2 ) , FOR WORKING VOLTAGES UPTO & INCLUDING 1100 VOLTS



PRODUCT DESCRIPTION	TECHNICAL DETAILS
<ul style="list-style-type: none"> <li>✓ Conductor Material-Multi strand, Annealed, Bare Electrolytic Grade Copper</li> <li>✓ Stranded/Flexible Copper Conductors as per IEC-60228 / IS:-8130</li> <li>✓ Insulation:-FR PVC Compound with Flame Retardant properties as per IS:-5831</li> <li>✓ Single Core - Single / Double layer insulation</li> <li>✓ Standard Colour:-Red, Black ,Blue, Green, Yellow .</li> <li>✓ Standard Length:- 90 mtr in carton box</li> <li>✓ 100 / 180 / 270 mtr in plastic bags</li>   <li>✓ <b>RoHS Compliant</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Operating Temperature: -70° C</li> <li>✓ Rated voltage: -Up to &amp; Including 1100 Volts</li> <li>✓ Spark Voltage: - According to insulation thickness , as per IS :-694-2010 (6 KV to 15 KV )</li> <li>✓ Volume Resistivity at 27°C- <math>1 \times 10^{13}</math> Ohm-cm (min)</li> <li>✓ Volume Resistivity at 70°C- <math>1 \times 10^{10}</math> Ohm-cm (min)</li> <li>✓ Critical Oxygen Index -29% (Minimum)</li> <li>✓ Temperature Index – 21% at 250 ° C (Minimum)</li> <li>✓ Smoke Density -40 % Transmission (Minimum)</li> <li>✓ Hydrochloric Acid Gas Release -20 % (Maximum )</li> </ul>

### APPLICATION:

FRLS PVC Insulated Wires & Cables are used in Buildings, Schools Hospitals etc.

Also Used in various Industry segments where Safety & Improved Fire performance is of utmost requirement .

### Product Specifications

Conductor Construction				Cable			
Nominal Cross section	Diameter of single strand-Max	Conductor Dia Max	Nominal thickness of insulation	Over All Diameter Max	Current carrying capacity # 2 cables, single phase		Conductor Resistance at 20° C - Max
					In conduit / Trunking	Unenclosed-clipped directly to a surface or on cable tray	
sq mm	mm	mm	mm	mm	Amps	Amps	ohm / Km
0.50	0.300	2.75	0.6	2.6	3	4	39.0
0.75	0.200	3.5	0.6	2.8	6	7	26.0
1.00	0.300	4.5	0.7	3.0	11	12	18.10
1.50	0.300	5.6	0.7	3.4	13	16	12.10
2.50	0.300	6.6	0.8	4.1	18	22	7.41
4.00	0.300	8.0	0.8	4.8	24	29	4.95
6.00	0.300	9.5	0.8	5.3	31	37	3.30
10.00	0.300	10.9	1.0	7.0	42	51	1.83
16.00	0.450	12.3	1.0	8.1	57	68	1.15

*\* Coil lengths can be supplied as per Customer's requirement also.*

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HEAT RESISTANT- FLAME RETARDANT(HR FR) PVC INSULATED, SINGLE CORE, UNSHEATHED, COPPER CONDUCTOR WIRES WITH IMPROVED FIRE PERFORMANCE ( C1 ) , FOR WORKING VOLTAGES UPTO & INCLUDING 1100 VOLTS



PRODUCT DESCRIPTION	TECHNICAL DETAILS
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### APPLICATION:

HR FR PVC Insulated Wires & Cables are used in Buildings, Schools Hospitals etc.

Also Used in various Industry segments where Improved Fire performance is of utmost requirement .

### Product Specifications

Conductor Construction				Cable			
Nominal Cross section	Diameter of single strand- Max	Conductor Dia Max	Nominal thickness of insulation	Over All Diameter Max	Current carrying capacity # 2 cables, single phase		Conductor Resistance at 20° C - Max
					In conduit / Trunking	Unenclosed-clipped directly to a surface or on cable tray	
sq mm	mm	mm	mm	mm	Amps	Amps	ohm / Km
0.50	0.300	2.75	0.6	2.6	3	4	39.0
0.75	0.200	3.5	0.6	2.8	6	7	26.0
1.00	0.300	4.5	0.7	3.0	11	12	18.10
1.50	0.300	5.6	0.7	3.4	13	16	12.10
2.50	0.300	6.6	0.8	4.1	18	22	7.41
4.00	0.300	8.0	0.8	4.8	24	29	4.95
6.00	0.300	9.5	0.8	5.3	31	37	3.30
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### APPLICATION:

FRLSH PVC Insulated Wires & Cables are used in Buildings, Schools Hospitals etc.

Also Used in various Industry segments where Safety & Improved Fire performance is of utmost requirement .

### Product Specifications

Conductor Construction				Cable			
Nominal Cross section	Diameter of single strand- Max	Conductor Dia Max	Nominal thickness of insulation	Over All Diameter Max	Current carrying capacity # 2 cables, single phase		Conductor Resistance at 20° C - Max
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1.50	0.300	5.6	0.7	3.4	13	16	12.10
2.50	0.300	6.6	0.8	4.1	18	22	7.41
4.00	0.300	8.0	0.8	4.8	24	29	4.95
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