



HOUSE WIRING ELECTRICAL BUILDING WIRE

STEP earned name & trust in house wires which inspire confidence in consultants, architects and builders. Step has built up a reputation and solid integrity. Step house wires carry a guarantee that far exceeds the ISI Certification they possess. Tested at every stage and supervised by experienced engineers, due to customer segments our name in both Indian and world markets.

CONDUCTOR

Flexible copper conductors are made from high conductivity Copper rods of 8mm diameter. The rod is drawn to required sizes of fine wires for the construction of conductors of different areas of cross section. Annealed plain copper conductors used in the flexible cables and cords conform to the requirements of table 3 class 5 of IS : 8130-1984. The construction of conductor is also made according to customer specification.

Insulation PVC insulations & other insulations like, FR PVC / FRLS PVC / HR PVC / ZERO HALOGEN & TEFLON (PTFE) With HR PVC.

'Type A' PVC Compound suitable for PVC insulation confirming to IS : 694 : 1990

FR PVC insulation has fire retardant properties. It restricting the spread of fire.

FRLS PVC insulation has better fire retardant properties & also emits Low Smoke, in case of fire.

HR PVC Insulation HR PVC Insulation ensures insulation stability at conductor temperature of 85C & 105C, in case of HR85 & HR 105PVC insulation respectively.

ZERO HALOGEN Insulation ZERO HALOGEN Insulation provides better flame retardant properties than HR & FRLS. Zero Halogen required >300 DegC temperature to catch fire (with 1% Oxygen).

Properties of STEP Wires

Feature	Normal PVC Wire	Heat Resistance HR-PVC	Fire Retardant FR-PVC	Fire Retardant Low Smoke FRLS	Zero Halogen Low Smoke
Insulation Material	PVC	PVC	Spl. PVC	Spl. PVC	Spl. Polymer
Insulation Property	Normal	Good	Good	Good	Very Good
Temperature Rating	70 Deg' C	85 Deg' C	70 Deg' C	70 Deg' C	85 Deg' C
Thermal Stability	Normal	Very Good	Good	Good	Very Good
Flame Retardancy	Good	Good	Very Good	Very Good	Excellent
Safety During Burning	Average	Average	Good	Good	Excellent
Requirement of Oxygen to catch fire (% in air)	>21	>21	>30	>30	>35
Temperature Required to Catch Fire (with 21% oxygen)	Room Temp.	Room Temp.	>250 Deg' C	>250 Deg' C	>300 Deg' C
Visibility during Cable Burning (%)	<20	<20	<35	>40	>80
Release of Halogen Gas during burning (% by weight)	<20	<20	<20	<20	Zero
Abrasion Resistance During Installation	Good	Good	Good	Good	Good

Single Core Unsheathed Flexible Cables in voltage grade 1100 Volts

Nominal cross sectional area of Conductor	Number/Nom. Dia. of wire	Nominal Thickness of Insulation	Overall Diameter (Approx.)	Current carrying capacity#		Max. resistance of Conductor per Km @ 20 C
				In conduit/ Trunking	Unenclosed-clipped directly to a surface or on cable tray	
Sq.mm	mm	mm	mm	Amps.	Amps.	Ohms.
0.75	24/0.2*	0.6	2.4	6	7	26.0
1.0	14/0.3*	0.7	2.8	11	12	18.10
1.5	22/0.3*	0.7	3.2	13	16	12.10
2.5	36/0.3*	0.8	3.8	18	22	7.41
4.0	56/0.3**	0.8	4.5	24	29	4.95

Standard Colours: Black, Red, Blue, Yellow, Green. (for earthing) Supplied in 90 metre lengths in attractive cartons. Confirm to IS-694 - 1990. * As per conductor class 2 of IS : 8130/1984 ** As per conductor class 5 of IS : 8130/1984 # As per IS 3961 (part V)-1968

6	84/0.3	0.8	5.4	31	37	3.30
10	140/0.3	1.0	6.8	42	51	1.91
16	101/0.45	1.0	8.0	57	68	1.21
25	158/0.45	1.2	10.0	71	86	0.780
35	220/0.45	1.2	11.1	91	110	0.554
50	315/0.45	1.4	13.2	120	140	0.386

House Wiring Suppliers in 90 meters lengths in Polythene & Cloth Packing Standard Colours: Red, Yellow, Blue & Black

Confirm to IS:694/1990.

* Sample card available on request. (1 to 4 Sq mm).

Single Core Unsheathed Flexible Cables in voltage grade 1100 Volts

2.0	28/0.3	0.8	3.40	17	20	9.40
4.5	65/0.3	0.9	4.85	28	33	4.08