

COPPER FLEXIBLE CABLE DATA

(House wires, Single Core & Multicore)

Size, Diameter & Current Rating

■ SINGLE CORE / MULTI CORE INDUSTRIAL CABLES AS PER IS 694 - 2010

VOLTAGE GRADE UP TO 1100 VOLTS

■ TABLE NO.1

BARE COPPER CONDUCTOR, PVC INSULATED UNSHEATHED 1100 V, SINGLE CORE INDUSTRIAL WIRE AND CABLE FOR PANEL BOARD AS PER IS : 694 - 2010 WITH ISI MARK (UP TO 50 SQ.MM)

Nominal Area in Sq. mm.	Max. DC Resistance Ohm/Km at 20°C	Nominal Insulation Thickness in mm.	Outer Diam (Approx)	Current Rating in Amps.	Nominal Area in Sq. mm.	Max. DC Resistance Ohm/Km at 20°C	Nominal Insulation Thickness in mm.	Outer Diam (Approx)	Current Rating in Amps.
0.50	39.00	0.60	2.1	4	70	0.272	1.4	13.44	215
0.75	26	0.60	2.27	7	95	0.206	1.6	15.46	260
1.00	19.50	0.60	2.44	12	120	0.161	1.6	17.16	305
1.50	13.30	0.60	2.66	16	150	0.129	1.8	19.08	355
2.50	7.98	0.70	3.27	22	185	0.106	2.0	21.2	415
4.00	4.95	0.80	3.99	29	240	0.0801	2.2	24.12	500
6.00	3.300	0.80	4.52	37	300	0.0641	2.4	27.04	585
10.00	1.910	1.00	5.9	51	400	0.0486	2.6	30.5	695
16.00	1.210	1.00	7.0	68	500	0.0384	2.8	34.96	790
25.00	0.780	1.20	8.77	86	630	0.0287	2.8	37.98	905
35.00	0.554	1.20	9.67	110	800	0.0224	3.2	43.72	1050
50.00	0.386	1.40	11.44	145	1000	0.0178	3.2	47.72	1185

NOTE : Industrial cables above 50 Sq. mm are not covered by IS : 694 but are as per IS. 2465. The conductor will be multi-standing as per class 5 of IS 8130 : 1984

■ TABLE NO.2

BARE COPPER CONDUCTOR, PVC INSULATED AND SHEATHED 1100V MULTICORE INDUSTRIAL CABLES AS PER IS:694/1990 WITH ISI MARK

Nominal Area in Sq. mm.	Max. DC Resistance Ohm/Km at 20°C	Nominal Insulation Thickness in mm.	Core diam. (mm.)	Nominal Sheath Thickness in mm.			Overall Diameter in mm. (Approx)			Current Rating in Amps.		
				2 core	3 core	4 core	2 core	3 core	4 core	2 core	3 core	4 core
0.50	39.00	0.60	2.20	0.90	0.90	0.90	6.08	6.41	6.96	4	3	3
0.75	26.00	0.60	2.40	0.90	0.90	0.90	6.44	6.8	7.39	7	6	6
1.00	19.50	0.60	2.60	0.90	0.90	0.90	6.78	7.17	7.8	12	10	10
1.50	13.30	0.60	2.80	0.90	0.90	1.00	7.22	7.65	8.34	16	14	14
2.50	7.98	0.70	3.50	1.00	1.00	1.00	8.64	9.16	10.01	20	18	18
4.00	4.95	0.80	4.30	1.00	1.00	1.00	10.08	10.94	11.98	27	24	24

MULTICORE ROUND INDUSTRIAL CABLE (6 CORES TO 30 CORES) 1100 V GENERALLY CONFORMING TO IS : 694 / 2010

Area Sq. m	0.50	0.75	1.00	1.50	2.50	4.00
Conductor Diam in mm.	0.94	1.20	1.34	1.64	2.08	2.61
Avg. Insu thickness mm.	0.60	0.60	0.60	0.60	0.70	0.80
Core Diam in mm.	2.20	2.50	2.60	2.90	3.50	4.30
No of Cores						
6	Avg. Sheath thickness mm.	0.90	1.00	1.00	1.00	1.10
	App Overall Diam mm.	8.17	8.91	9.42	10.08	12.13
7	Avg. Sheath thickness mm.	0.90	1.00	1.00	1.00	1.10
	App Overall Diam mm.	8.17	8.91	9.42	10.08	12.13
8	Avg. Sheath thickness mm.	1.00	1.00	1.00	1.10	1.20
	App Overall Diam mm.	9.01	9.82	10.38	11.11	13.55
10	Avg. Sheath thickness mm.	1.00	1.10	1.10	1.10	1.30
	App Overall Diam mm.	10.46	11.40	12.08	12.96	15.82
12	Avg. Sheath thickness mm.	1.00	1.10	1.10	1.10	1.30
	App Overall Diam mm.	10.79	11.76	12.47	13.39	16.34
14	Avg. Sheath thickness mm.	1.10	1.10	1.10	1.20	1.30
	App Overall Diam mm.	11.74	12.33	13.08	14.25	17.16
16	Avg. Sheath thickness mm.	1.10	1.20	1.20	1.20	1.40
	App Overall Diam mm.	12.14	13.19	14.0	15.02	18.31
19	Avg. Sheath thickness mm.	1.10	1.20	1.30	1.30	1.40
	App Overall Diam mm.	12.77	13.87	14.94	16.04	19.29
24	Avg. Sheath thickness mm.	1.20	1.30	1.40	1.40	1.50
	App Overall Diam mm.	15.06	16.36	17.58	18.9	22.98
30	Avg. Sheath thickness mm.	1.30	1.30	1.40	1.40	1.50
	App Overall Diam mm.	16.17	17.29	18.38	19.99	23.90
Max Conductor Resistance in Ohm/km at 20°C		39.00	26.00	19.50	13.30	7.98
Recommended Current Rating in AMP		4	7	12	16	22

■ TABLE NO.3

PLAIN COPPER CONDUCTOR, PVC INSULATED AND SHEATHED 1100 V MULTICORE INDUSTRIAL CABLES

Nominal Area in Sq. mm.	Max. DC Resistance Ohm/Km at 20°C	Nominal Insulation Thickness in mm.	Core diam. (mm.)	Nominal Sheath Thickness in mm.			Overall Diameter in mm. (Approx)			Current Rating in Amps.		
				2 core	3 core	4 core	2 core	3 core	4 core	2 core	3 core	4 core
6	3.30	0.80	4.80	1.10	1.20	1.20	11.36	12.28	13.46	34	30	30
10	1.91	1.00	6.30	1.30	1.40	1.40	14.50	15.66	17.28	44	39	39
16	1.21	1.00	7.30	1.40	1.40	1.40	16.94	18.06	19.88	61	55	55
25	0.780	1.20	9.10	1.40	1.50	1.60	20.48	22.10	24.58	69	60	60
35	0.554	1.20	10.10	1.60	1.60	1.70	22.70	24.85	26.98	88	77	77
50	0.386	1.40	11.90	2.00	2.00	2.00	27.04	28.89	31.86	116	102	102
70	0.272	1.40	13.90	2.20	2.20	2.20	31.48	33.65	37.15	155	140	140
95	0.206	1.60	16.30	2.40	2.40	2.40	35.94	38.43	42.45	190	165	165