CM/L 1919062

IS : 694

NEWCAB®

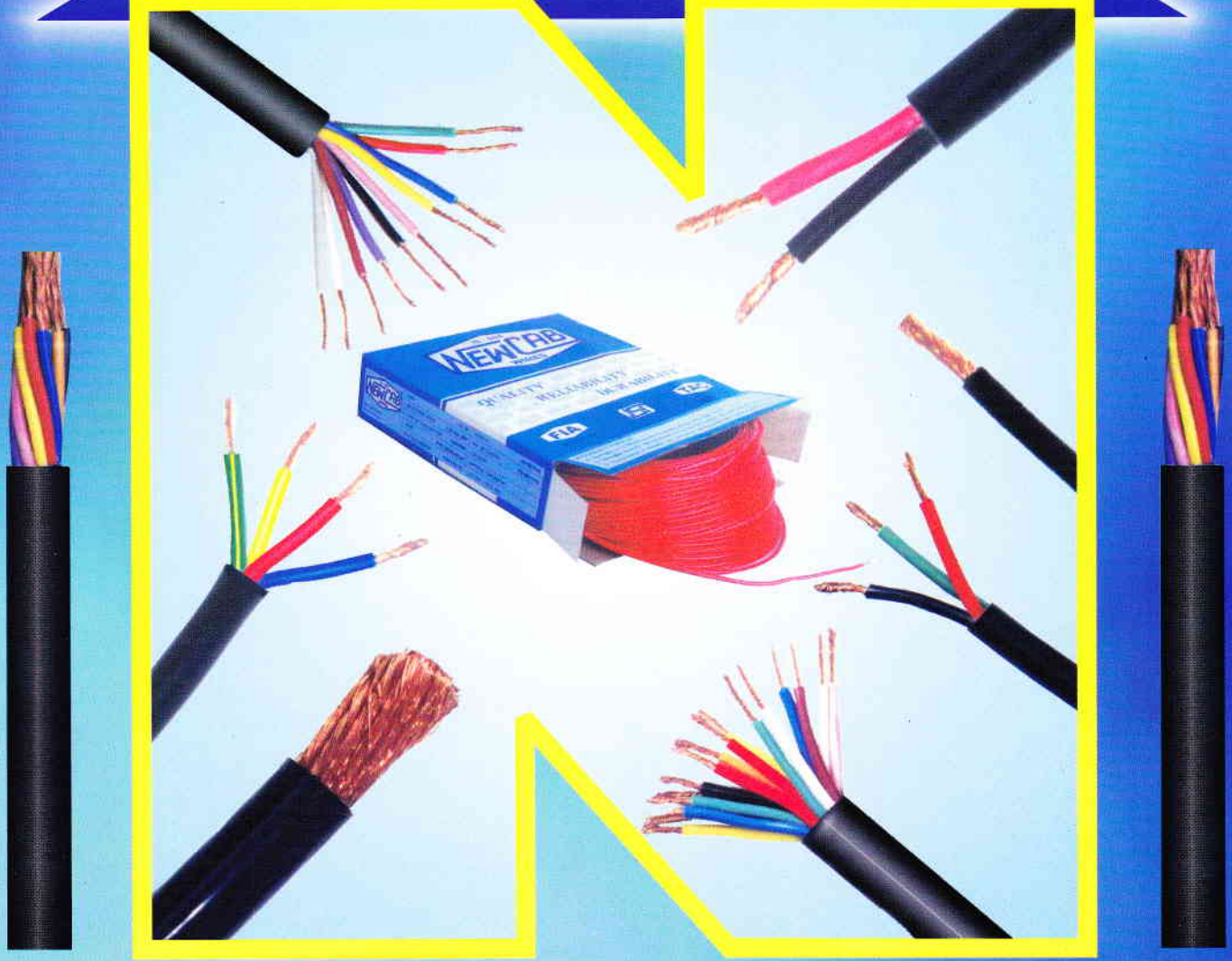
CABLES

IS:694

FIA

IS:694

TAC



IS : 694 NEWCAB® CABLES

IS:694 ISI 1990

About Ourselves

We are manufacturing "NEWCAB" Brand P.V.C. Insulated, flexible/solid/stranded, single/Multi core wires & Cables for fixed use with Bright Annealed Bare, High Conductivity Tinned Electrolity Copper Conductor as per IS : 8130/1984 & insulated/sheathed with electric grade P.V.C./H.R. PVC compound as per IS : 5831/1984. Futher all the cables are manufactured & tested confirming to IS : 694/1990 for working voltage upto and including 1100 V with ISI Mark. We're been granted ISI Licence for copper cable as per Is : 694/1990. We are specialist in Hook Up wires for all florocent lighting Industries.

We have all kind of testing facilities at our factory. The rigourous Quality Control, dot delivery & services have helped us in building prestigious clintale such as Crompton, Bajaj, Wipro, Mysore, Jindal, L&T etc. and also approved by M.S.E.B., P.W.D., Housing Board, Cidco, B.M.C., MAHADA, B.A.R.C., Western & Central Railway, B.S.E.S., B.E.S.T.

With our vast experience, operational integrity and confidential client relationship, we will be able to satisfy your needs. Customers satisfaction has been our Prime Motto and given the opportunity, we will leave no stone unturned to add your name in our regular land of satisfied clients list.

We are stable, strong, mature & reliable company and would mention in all modesty a clientele which is growing not only in numbers but also in stature for cables not only to I.S. specification but also special cables to customers specification. Something unique for relatively new and a small scale unit.

OUR RANGE OF PRODUCTS :

1. *SINGLE CORE : Solid Stranded and Flexible wires, Panel Board & Switch gears cables.*
2. *MULTICORE : Flexible wire as per IS:694 for electrical appliances.*
3. *HOUSE HOLD : Wires as per IS:694 & TAC / FIA Approved*
4. *Three & Four cores flat cables for submersible pumps.*
5. *Twin flat & Twin parallel cable & wires.*
6. *Automobiles wires & cable for vehicles.*
7. *Compensating cables*
8. *Co-axial cables.*
9. *Hook up wires.*
10. *Special cables as per customer requirement & specification.*

TYPE & SIZE OF WIRES :

1. *We are manufacturing the flexile/solid stranded wires as per IS:694/1990 for 1100 volts from 0.5 sq. mm to 300.0 sq. mm in single & multi cores up to 50.0 sq. mm.*
2. *Flexible multi core cables from 2 core to 4 core from 0.5 sq. to 4.00 sq.mm conforming to IS:694/1990 for 1100 volts grades with ISI mark. And 6 core to 24 core based on IS:694/1990 in copper conductor.*
3. *Flexible House wiring single core cables unsheathed upto 1100 volts grade as per IS:694/1990 with ISI mark, FIA/TAC approved.*

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NEWCAB brand, PVC insulated LT Light Duty Cables are as per IS: 694-1990 and are suitable for fixed wiring and flexible operation.

The cables are suitable for use on AC single phase (earthen or unearthed) systems for rated voltage up to and including 1100 volts. These cables can be used on DC systems for rated voltage up to including 1500 volts to earth.

CONDUCTOR :

The most acceptable metals for conductors are copper due to their higher conductivity and ductility. As copper has got higher affinity for sulphur, it corrodes in the atmosphere where sulphur fumes are present. In these conditions tinned copper should be used.

CONDUCTOR CONSTRUCTION :

The most economical construction is solid conductor i.e. conductor is made of one single wire. As the area of conductor increases, solid conductor becomes more stiff and hence difficult to handle. In this case stranded construction is adopted. Here the conductor is made of number of strands. The strands are arranged in spiral layers in 1+6+12+18 etc formations.

In case of conductors used for flexible cable s, number of the fine copper strands are twisted in one direction to form a bunched conductor. In case of bigger size conductors, number of such bunched conductors are stranded in rope construction to form the conductor. Where crimping of lugs are required the conductor has to be stranded or bunched construction only. The construction of conductors as per IS-694 is as follows, and they must as per IS-8130/1984 which is the specification for conductors for electric cables.

Nominal Cross-sectional Area Copper	Solid / Stranded	Flexibility Class As per IS-8130
Up to and including 6.0 Sq. mm	*Solid / Stranded*	*Class 1 or Class 2*
Above 6.0 Sq. mm	*Stranded*	*Class 2*
Flexible cables of all sizes	*Bunched*	*Class 5*

As per the international practice which is also adopted by ISI, the size of the conductor is decided by its resistance only. The constructions of the conductor mentioned in the following tables are only for guidance and are as per market convention. It may vary within the prescribed Limits of IS-8130.

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INSULATION :

The PVC covering over conductor is called insulation and provided by extrusion process. The insulated conductor is called a core.

As per IS-694 the insulation should be of Type A PVC compound as per IS - 5831 and it is suitable for 70° C Continuous operation. In case of NEWCAB L.T. cables with heat resisting insulation the word HR 85° is also printed.

The following colour code is used for identification :

	Cable for fixed wiring	Flexible Cables
1 Core	Red, Black, Yellow, Blue, White or Grey	Red, Black, Yellow, Blue, Whit or Grey
2 Core	Red and Black	Red and Black
3 Core	Red, Yellow, Blue	Red, Black, Green
4 Core	Red, Yellow, Blue & Black	Red, Yellow, Blue, Green
5 Core	Red, Yellow, Blue, Black, Grey	Red, Yellow, Blue, Black, Green
6 Core & above	Two adjacent cores Blue and Yellow (counting and direction cores) and remaining Grey in each layer. OR By different colours and helical colour marking on cores. OR By Printing Number on each cores	

LAYING UP :

In case of multi core cables the cores are laid up with suitable lay.

SHEATH :

The PVC coating on core of single core cables and on laid up cores in case of multi - core cables is called SHEATH. As per IS-694 it should be of Type ST-1 PVC compound as per IS-5831.It is suitable for 70° C continuous operation.

SHEATH COLOUR

The colour of the sheath is generally BLACK. We may supply other colours also on request.

CABLE CODE :

The following codes are used for designating the cables as per Is-694 :

Constituent	Code Letter
Copper Conductor	
Aluminium Conductor	A
PVC Insulation	Y
PVC Sheath	YY

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EXAMPLES :

1.5 Sq. mm — Y : *Plain copper conductor, PVC insulated unsheathed cable having SINGLE core of 1.5 Sq. mm. conductor size.*

3 Core X 1.5 Sq. mm — YY : *Plain Copper conductor, PVC insulated, Laid up, PVC sheathed cable having THREE cores of 1.5 Sq. mm conductor size.*

DELIVERY LENGTH :

The cables are generally delivered in 100 meters coils wrapped with Polyethylene /Hessian. House Hold Wires are Packed in 90 meters coils in attractive Box packing. The bigger size of cables are supplied on wooden drums.

"NEWCAB" SINGLE CORE BRIGHT ANNEALED BARE SOLID/STRANDED COPPER CONDUCTOR PVC INSULATED UNSHEATHED CABLE 650/1100 V HOUSE SERVICE WIRES AS PER IS:694/1990 WITH ISI MARK

Area in Sq. mm	Construction No. & Dia of wire in 'mm'	Resistance @ 20°C Ohm/Km Max.	Insulation Thickness Nominal in mm	Overall Diameter Approx. mm.	Current Rating in Amp.
1.0	1/1.12	18.1	0.7	2.60	10
1.5	1/1.38	12.1	0.7	2.90	13
1.5	3/0.80	12.1	0.7	3.25	13
2.5	1/1.78	7.41	0.8	3.50	20
2.5	3/1.04	7.41	0.8	3.90	20
4	1/2.25	4.61	0.8	4.00	26
4	7/0.85	4.61	0.8	4.30	26
6	1/2.76	3.08	0.8	4.50	35
6	7/1.04	--	0.8	4.80	35
10	7/1.35	1.83	1.0	6.20	44
16	7/1.70	1.15	1.0	7.20	55
25	7/2.14	0.727	1.2	8.90	75
35	7/2.50	0.524	1.2	10.00	90
50	7/3.00	0.379	1.4	11.90	120
	19/1.78	0.387	---	11.90	120
70	19/2.14	0.268	1.4	13.60	150
95	19/2.50	0.193	1.6	15.80	175

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"NEWCAB" BRIGHT ANNEALED BARE COPPER CONDUCTOR PVC INSULATED UNSHEATHED 650/1100 V, SINGLE CORE CABLES FOR PANEL BOARD WIRING AS PER **IS:694/1990 WITH ISI MARK** (UP TO 50 SQ. MM)

Area in Sq. mm	Conductor Construction in General	Conductor Dia in mm	Max. DC Resistance Ohm/Km At 20°C	Insulation Thickness Nominal in mm	Cable Dia (Approx) in mm	Current Rating in Amp.
0.50	16/0.20	0.94	39.00	0.60	2.20	4
0.75	24/0.20	1.20	26.00	0.60	2.50	7
1.00	32/0.20	1.34	19.50	0.60	2.60	11
1.50	48/0.20	1.64	13.30	0.60	2.90	14
2.50	80/0.20	2.08	7.98	0.70	3.50	19
4.00	56/0.30	2.61	4.95	0.80	4.30	26
6	84/0.30	3.50	3.300	0.80	5.30	33
10	63/0.45	4.60	1.910	1.00	6.70	45
16	101/0.45	6.00	1.210	1.00	8.20	60
25	158/0.45	7.60	0.780	1.20	10.00	75
35	220/0.45	8.70	0.554	1.20	11.3	95
50	315/0.45	10.60	0.386	1.40	13.5	125
70	440/0.45	12.30	0.272	1.60	15.5	170
95	597/0.45	14.70	0.206	1.80	18.5	210
120	755/0.45	16.70	0.161	2.00	20.9	235
150	943/0.45	18.30	0.129	2.00	22.5	295
185	1163/0.45	20.00	0.106	2.2	24.6	330
240	1508/0.45	23.00	0.0801	2.2	27.6	400

Note : Cable above 50 sq.mm. are not covered by IS:694 but are as per IS:2465

"NEWCAB" BRIGHT ANNEALED BARE COPPER CONDUCTOR PVC INSULATED AND SHEATHED 650/1100 V, MULTICORE FLEXIBLE CABLES AS PER **IS:694/1990**

Area in Sq. mm	Construction No./Dia	Cond. Dia in mm	Resistance @ 20° C Ohms/Km (Max)	Insulation thickness nominal mm	Core Dia mm	Sheath thickness in mm nominal			Overall Diameter in mm Approx			Current Rating Amp.
						2 Core	3 Core	4 Core	2 Core	3 Core	4 Core	
6	84/0.3	3.50	3.30	0.80	5.10	1.15	1.15	1.40	12.60	13.40	15.20	33
10	063/0.45	4.60	1.91	1.00	6.60	1.40	1.40	1.40	16.00	17.00	18.80	45
16	101/0.45	6.00	1.21	1.00	8.00	1.40	1.40	1.40	18.80	20.10	22.20	60
25	158/0.45	7.60	0.780	1.20	10.00	2.00	2.00	2.00	24.00	25.60	28.20	75
35	220/0.45	8.70	0.554	1.20	11.10	2.00	2.00	2.00	26.30	28.00	31.00	95

Note : Cables above 4.00 sq.mm are not covered by IS:694 but are Generally as per IS:694-1990

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"NEWCAB" PVC INSULATED AND SHEATHED HEAVY DUTY FLEXIBLE MULTICORE CABLES MANUFACTURED WITH ELECTROLITY BRIGHT ANNEALED BARE COPPER CONDUCTOR AS PER IS: 8139 FOR WORKING VOLTAGE 650/1100 VOLTS AS PER IS: 694/1990 WITH ISI MARK						
Area sq. mm.	0.50	0.75	1.00	1.50	2.50	4.00
General Construction No./Dia	16/0.20	24/0.20	32/0.20	48/0.20	80/0.20	56/0.30
Conductor Dia in mm.	0.94	1.20	1.34	1.64	2.08	2.61
Avg. Insu. thickness in mm.	0.60	0.60	0.60	0.60	0.70	0.80
Core dia in mm.	2.20	2.50	2.60	2.90	3.50	4.30
Max. Conductor resistance in Ohms/km at 20°C.	39.00	26.00	19.50	13.30	7.98	4.95
Recommended Current Rating in Amp.	4	7	11	14	19	26
No. of Cores :						
2 Avg. Sheath thickness mm.	0.9	0.9	0.9	0.9	1.0	1.0
App. overall Dia mm.	6.2	6.8	7.0	7.6	9.0	10.6
3 Avg. Sheath thickness mm.	0.9	0.9	0.9	0.9	1.0	1.0
App. overall Dia mm.	6.6	7.2	7.5	8.1	9.6	11.3
4 average. Sheath thickness mm.	0.9	0.9	0.9	1.0	1.0	1.0
App. overall Dia mm.	7.2	7.9	8.1	9.0	10.5	12.4
"NEWCAB" MULTICORE ROUND PVC INSULATED FLEXIBLE CABLES (6 CORES TO 24 CORES) GENERALLY AS PER LATEST IS SPECIFICATION IS:694/1990 FOR WORKING VOLTAGE UP TO AND INCLUDING 110 VOLTS.						
6 Avg. Sheath thickness mm.	0.90	1.00	1.00	1.00	1.10	1.20
App. overall Dia mm.	8.50	9.50	9.80	10.70	12.70	15.30
7 Avg. Sheath thickness mm.	0.90	1.00	1.00	1.00	1.10	1.20
App. overall Dia mm.	8.50	9.50	9.80	10.70	12.70	15.30
8 Avg. Sheath thickness mm.	1.00	1.00	1.00	1.10	1.20	1.30
App. overall Dia mm.	9.30	10.40	10.70	11.90	14.10	16.90
10 Avg. Sheath thickness mm.	1.00	1.10	1.10	1.10	1.30	1.40
App. overall Dia mm.	10.80	12.20	12.60	13.80	16.60	20.00
12 Avg. Sheath thickness mm.	1.00	1.10	1.10	1.10	1.30	1.40
App. overall Dia mm.	11.20	12.60	13.00	14.30	17.20	20.70
14 Avg. Sheath thickness mm.	1.10	1.10	1.10	1.20	1.30	1.40
App. overall Dia mm.	12.00	13.30	13.70	15.20	18.10	21.80
16 Avg. Sheath thickness mm.	1.10	1.20	1.20	1.20	1.40	1.50
App. overall Dia mm.	12.60	14.20	14.60	16.00	19.30	23.20
19 Avg. Sheath thickness mm.	1.10	1.20	1.30	1.30	1.40	1.50
App. overall Dia mm.	13.20	14.90	15.60	17.10	20.30	24.50
24 Avg. Sheath thickness mm.	1.20	1.30	1.30	1.40	1.40	1.50
App. overall Dia mm.	15.60	17.60	18.20	20.20	23.80	28.80

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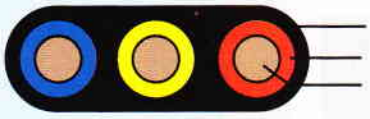
"NEWCAB" BRIGHT ANNEALED BARE COPPER CONDUCTOR PVC INSULATED UNSHEATHED 650/1100 V, SINGLE CORE CABLES FOR HOUSE WIRING AS PER IS:694/1990 WITH ISI MARK, FIA/TAC Approved

Nominal area of Conductor (sq. mm.)	No/Size of wire in MM. (No/MM.)	Nom. Insulation Thickness (MM.)	Resistance @ 20° C Ohms/km (Max.)	Continues Current Ratting at 400 ..... temp. (Amps)				Nearest Equivalent Size	
				Bunched Enclosed in Conduit Trunking		Clipped direct to Surface or on Cable Tray/ bunched unenclosed			
			✦	✯	❖	✯	❖	SWG	INCH
1.00	H.W. 14/0.3	0.7	18.10	11	9	12	12	= 1/18	1/044
1.50	H.W. 22/0.3	0.7	12.10	13	11	16	15	>3/22	3/029
2.50	H.W. 36/0.3	0.8	7.41	18	16	22	20	>3/20	3/036
4.00	H.W. 56/0.3	0.8	4.96	24	20	29	26	<7/20	7/036
6.00	H.W. 85/0.3	0.8	3.30	31	25	37	33	>7/18	7/044

✯ Two Cables single phase AC
❖ Three or Four Cable Three Phase AC
✦ 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

FLAT CABLE - AS PER IS:694



Submersible Pump cable is a specialized product to be used for submersible pumps in a deep well. The area of installation is physically restrictive, and the environment is very hostile. NEWCAB is designed and manufactured keeping in mind these factors to achieve the highest possible degree of reliability.

650 / 110 VOLTS

NEWCAB THREE CORE FLAT CABLES FOR SUBMERSIBLE PUMPS

CONDUCTOR		Approx Diameter of Conductor	Calculated Resistance of Conductor @20° C	PVC INSULATION	PVC SHEATH	Current Rating at 40° C
Nominal Area in Sq.mm.	Nos. & Dia. of Wire Nos./mm.	mm	Ohm/Km	Radial Thickness mm.	Radial Thickness mm.	Amps.
1.5	22/0.30	1.70	12.7	0.8	1.15	14
2.5	36/0.30	2.10	7.6	0.9	1.15	18
4.0	56/0.30	2.70	4.71	1.0	1.15	26
6.0	85/0.30	3.50	3.14	1.0	1.15	31
10.0	140/0.30	4.60	1.82	1.0	1.40	42
16.0	226/0.30	5.90	1.16	1.0	1.40	57
25.0	354/0.30	7.60	0.743	1.2	2.00	72
35.0	495/0.30	8.80	0.527	1.2	2.00	90

THE ABOVE DATA IS INDICATIVE AND MAY BE REVISED WITHOUT PRIOR INFORMATION
NEWCAB WILL NOT BE LIABLE FOR ANY DAMAGES ARISING OUT OF INCORRECT APPLICATION

NEW AGE CABLE INDUSTRIES