





CE

Electrical Wires & Cables

Power & Control Cables

Instrumentation Cables

Weighte Caples

Submersible Cables



TRS Cables

Welding Cables

Building Cables

**BRIMSON** 

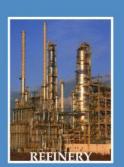
CABLES PRIVATE LIMITED



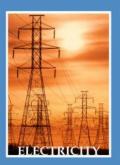
Telephone Cables

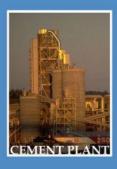


















**BRIMSON** Cables, a product of advance technology know-how and vast experience in the field of cable manufacturing, is one of pioneer brand of cables in India in the field of Domestic as well as Industrial Electrical Wires & Cables.

**BRIMSON** Cables are manufactured with latest plant and machinery in our factory located in most prestigious "Noida" Industrial area.

At **BRIMSON** Cables, the dedicated team of experienced professionals, skilled staff, the use of best quality raw materials, stringent quality control measure at every stage of production enables us to meet high quality standards required by our prestigious customers like Northern Coalfield, Keltron, NTPC, CMS Traffic Systems Ltd., West Bengal Agro Industries, ECE Industries Ltd., Manikgarh Cements, Nevyell Lignites, BARC, Chattisgarh Electricity Board, Rajasthan Electricity Board, NHPC, U.P. Power Corporation, MES, HUDA, MSEB, PWD, BHEL, Northern Railways etc.

We are in possession of ISI license issued by Bureau of Indian Standard IS:694/1990 / IS:1554 & IS:7098 (Part-1) and we have at our disposal all necessary infrastructure including a full-fledge plant with sophisticated machinery. We have a very sophisticated lab equipped with latest instruments for testing ultimate strengths of its conductors, insulation, steel or sheath in accordance to IS specifications.

We have adopted ISO-9001/2000 Quality Management System and have been certified by DNV, the Netherlands & also our products are **C€** certified, (Certifying to European Standards).

Our R&D professionals keep themselves abreast of the latest technology development in the field of cable manufacturing all over the globe, to provide quality cables at its BEST.

# Production capacity per annum:

0.3010		THE STATE OF	
•	Power cables	6000 Kms.	Assorted size
•	Control cables	4800 Kms.	Assorted size
•	Instrumentation cables	2000 Kms.	Assorted size
•	Single core industrial cables	12,000 Kms.	Assorted size
•	Multicore industrial cables	2400 Kms.	Assorted size

# BRIMSON® 1.1 KV TWIN CORE ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED, ARMOURED PVC SHEATHED CABLES CONFORMING TO IS:1554/IS: 7098 (PART-1)



Nominal	Nominal	Minimum	- Contents	URED	Minimum	Approx	Approx	Max. DC	CUR	RENT RATI	NGS
Cross sectional area Sq. mm.	Thickness of Insulation mm.	thickness of Inner sheath mm.	Galv. Round Steel Wire Nominal Dia. mm	Galv. Flat Steel Strip Nominal thickness mm	thickness of Outer sheath mm.	overall Diameter mm.	Weight of cable kg/km.	Conductor Resistance at 20° C Ohm/km.	Direct in Ground Amps.	In Ducts Amps.	In Air Amps.
*2.5	0.9	0.30	1.4		1.24	13.4	380	12.1000	25	21	21
*4	1.0	0.30	1.4		1.24	14.7	450	7.4100	32	27	27
*6	1.0	0.30	1.4		1.24	15.8	500	4.6100	40	34	35
*10	1.0	0.30	1.4		1.24	17.9	600	3.0800	55	45	47
16	1.0	0.30		0.80	1.40	17.0	500	1.9100	70	58	59
25	1.2	0.30		0.80	1.40	20.1	650	1.2000	90	76	78
35	1.2	0.30		0.80	1.40	21.7	750	0.8680	110	92	99
50	1.4	0.30		0.80	1.40	24.5	950	0.6410	135	115	125
70	1.4	0.30		0.80	1.56	27.1	1150	0.4430	160	140	150
95	1.6	0.40		0.80	1.56	30.8	1460	0.3200	190	170	185
120	1.6	0.40		0.80	1.56	32.9	1670	0.2530	210	190	210
150	1.8	0.40		0.80	1.72	36.3	2010	0.2060	240	210	240
185	2.0	0.50		0.80	1.88	40.3	2450	0.1640	275	240	275
240	2.2	0.50		0.80	2.04	44.8	2950	0.1250	320	275	325
300	2.4	0.60		0.80	2.20	49.6	3560	0.1000	355	305	365
400	2.6	0.70		0.80	2.36	55.9	4500	0.0778	385	345	420
500	3.0	0.70		0.80	2.68	62.5	5600	0.0605	410	370	450

BRIN	EON®			_			R, PVC INSUI	1/2		101	
*2.5	0.9	0.30	1.4		1.24	14.0	425	12.1000	21	18	18
*4.0	1.0	0.30	1.4		1.24	15.6	500	7.4100	28	23	23
*6.0	1.0	0.30	1.4		1.24	17.3	575	4.6100	35	30	30
*10	1.0	0.30	1.4		1.40	19.0	700	3.0800	46	39	40
16	1.0	0.30	222	0.80	1.40	19.3	650	1.9100	60	50	51
25	1.2	0.30		0.80	1.40	22.0	800	1.2000	76	63	70
35	1.2	0.30		0.80	1.40	24.0	950	0.8680	92	77	86
50	1.4	0.30		0.80	1.56	27.6	1200	0.6410	110	95	105
70	1.4	0.40		0.80	1.56	30.8	1500	0.4430	135	115	130
95	1.6	0.40	555 (	0.80	1.56	34.6	1900	0.3200	165	140	155
120	1.6	0.40		0.80	1.72	37.5	2240	0.2530	185	155	180
150	1.8	0.50		0.80	1.88	41.9	2700	0.2060	210	175	205
185	2.0	0.50		0.80	1.88	45.6	3200	0.1640	235	200	240
240	2.2	0.60		0.80	2.20	51.6	3990	0.1250	275	235	280
300	2.4	0.60		0.80	2.36	56.7	4850	0.1000	305	260	315
400	2.6	0.70		0.80	2.52	64.1	6100	0.0778	335	290	375
500	3.0	0.70		0.80	2.84	71.5	7600	0.0605	350	310	410

BRIN	MSON®						PVC INSULA ING TO IS:1				
*2.5	0.9	0.30	1.4		1.24	16.5	480	12.1000	21	18	18
*4.0	1.0	0.30	1.4		1.24	18.0	550	7.4100	28	23	23
*6.0	1.0	0.30	1.4		1.24	19.5	650	4.6100	35	30	30
*10	1.0	0.30		0.80	1.40	20.0	660	3.0800	46	39	40
16	1.0	0.30		0.80	1.40	23.0	750	1.9100	60	50	51
25	1.2	0.30		0.80	1.40	23.7	950	1.2000	76	63	70
35	1.2	0.30		0.80	1.40	25.9	1165	0.8680	92	77	86
50	1.4	0.40	222	0.80	1.56	30.4	1540	0.6410	110	95	105
70	1.4	0.40		0.80	1.56	33.5	1800	0.4430	135	115	130
95	1.6	0.40	222	0.80	1.72	38.1	2400	0.3200	165	140	155
120	1.6	0.50		0.80	1.88	41.9	2800	0.2530	185	155	180
150	1.8	0.50	222	0.80	1.88	45.9	3350	0.2060	210	175	205
185	2.0	0.60	202	0.80	2.04	50.9	4000	0.1640	235	200	240
240	2.2	0.60	222	0.80	2.36	57.1	5050	0.1250	275	235	280
300	2.4	0.70		0.80	2.52	63.2	6200	0.1000	305	260	315
400	2.6	0.70		0.80	2.84	71.4	7850	0.0778	335	290	375
500	3.0	0.70	757	0.80	3.00	79.2	9600	0.0605	350	310	410

\* If required, these sizes can be offered with stranded conductors also.

THE ABOVE DATA IS INDICATIVE AND MAY BE REVISED WITHOUT PRIOR INFORMATION

BRIMSON® 1.1 KV 3.5 CORE ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED, ARMOURED PVC SHEATHED CABLES CONFORMING TO IS:1554/IS: 7098 (PART-1)



NOMINA SECTION	L CROSS IAL AREA	NOMINAL THICKNESS OF INSULATION		MINIMUM ARMOURED Thickness Galv. Flat OF INNER Steel Strip		Minimum thickness of Outer	Approx. Overall	Approx. Weight of Cable	Max. DC C Resistanc		CURRENT RATINGS		
MAIN SQ. MM.	NEUTRAL SQ. MM.	MAIN MM.	NEUTRAL MM.	SHEATH MM.	Nominal thickness mm	sheath mm.	Diameter mm.	Kg./Km.	Main Ohm/Km.	Neutral Amps.	Direct in Ground Amps.	In Ducts Amps.	In Air Amps.
25	16	1.2	1.0	0.3	0.8	1.40	23.1	900	1.200	1.910	76	63	70
35	16	1.2	1.0	0.3	0.8	1.40	24.9	1030	0.868	1.910	92	77	86
50	25	1.4	1.2	0.3	0.8	1.56	28.8	1350	0.641	1.200	100	95	105
70	35	1.4	1.2	0.4	0.8	1.56	32.2	1725	0.443	0.868	135	115	130
95	50	1.6	1.4	0.4	0.8	1.56	36.3	2130	0.320	0.641	165	140	155
120	70	1.6	1.4	0.5	0.8	1.72	40.1	2580	0.253	0.443	185	155	180
150	70	1.8	1.4	0.5	0.8	1.88	43.8	3050	0.206	0.443	210	175	205
185	95	2.0	1.6	0.5	0.8	2.04	48.4	3650	0.164	0.320	235	200	240
240	120	2.2	1.6	0.6	0.8	2.20	54.3	4580	0.125	0.253	275	235	280
300	150	2.4	1.8	0.6	0.8	2.36	59.7	5500	0.100	0.206	305	260	315
400	185	2.6	2.0	0.7	0.8	2.68	67.6	7000	0.0778	0.164	335	290	375
500	240	3.0	2.2	0.7	0.8	2.84	75.2	8600	0.0605	0.125	350	310	410

1.1 Kv annealed high conductivity Solid COPPER Conductor, 1.5 Sq. Mm. PVC Insulated, Inner sheathed, Armoured/Unarmoured PVC Sheathed Cables confirming to IS: 1554/ IS: 7098 (Part-1)



Number	Nominal	Minimum Thickness	ARM	OUR	Nominal	Minimum	APPROX. DIAM		APPROX. OF C.	WEIGHT ABLE	MAX. DC	CURF	RENT RAT	INGS
of Cores No.	Thickness of Insulation mm.	of Inner Sheath mm.	Galv. Round Steel wire Nominal Diameter mm.	Galv. Flat Steel strip Nominal thickness mm.	Sheath Thickness for Un- armoured	Sheath Thickness for Armoured	UNARMOURED	ARMOURED	UNARMOURED	ARMOURED	Conductor Resistance AT 20° C Ohm/Km.	DIRECT IN GROUND AMPS.	IN DUCTS AMPS.	IN AIR AMPS.
2	0.8	0.3	1.4	-	1.8	1.24	10.20	13.38	130	350	12.1	23	20	20
3	0.8	0.3	1.4		1.8	1.24	10.70	13.88	160	400	12.1	21	17	17
4	0.8	0.3	1.4		1.8	1.24	11.50	14.68	190	450	12.1	21	17	17
5	0.8	0.3	1.4	-	1.8	1.24	12.45	15.55	225	500	12.1	21	17	17
6	0.8	0.3	1.4		1.8	1.24	13.20	16.48	250	550	12.1	15	13	13
7	0.8	0.3	1.4		1.8	1.24	13.20	16.48	265	565	12.1	14	13	13
10	0.8	0.3	1.4	-	1.8	1.40	16.20	18.70	350	750	12.1	13	11	11
12	0.8	0.3		0.8	1.8	1.24	17.80	19.20	400	650	12.1	12	10	10
14	0.8	0.3	-	0.8	1.8	1.40	17.90	19.97	450	760	12.1	11	10	10
16	0.8	0.3	-	0.8	1.8	1.40	19.25	20.87	500	800	12.1	11	9	9
19	0.8	0.3		0.8	2.0	1.40	20.00	21.80	600	850	12.1	10	9	9
24	0.8	0.3		0.8	2.0	1.40	23.00	24.90	725	1050	12.1	9	8	8
30	0.8	0.3	•	0.8	2.0	1.40	24.50	26.17	860	1200	12.1	9	7	7
37	0.8	0.3		0.8	2.0	1.40	26.00	28.00	1050	1400	12.1	8	7	7

BRIMSON® 1.1 Kv annealed high conductivity Solid COPPER Conductor, 2.5 SQ. MM. PVC Insulated, Inner sheathed, Armoured/Unarmoured PVC Sheathed Cables confirming to IS: 1554/ IS: 7098 (Part-1)														
2	0.9	0.3	1.4	-	1.8	1.24	10.68	14.58	160	425	7.41	32	27	27
3	0.9	0.3	1.4	-	1.8	1.24	11.40	15.17	225	475	7.41	27	24	24
4	0.9	0.3	1.4	-	1.8	1.24	11.50	16.13	250	530	7.41	27	24	24
5	0.9	0.3	1.4	-	1.8	1.24	14.10	17.49	300	600	7.41	27	24	24
6	0.9	0.3	1.4	-	1.8	1.24	15.40	18.28	340	675	7.41	20	18	18
7	0.9	0.3	1.4		1.8	1.24	15.40	18.28	375	700	7.41	20	17	17
10	0.9	0.3		0.8	2.0	1.40	19.00	21.10	500	780	7.41	18	15	15
12	0.9	0.3		0.8	2.0	1.40	20.00	21.69	600	850	7.41	17	14	14
14	0.9	0.3		0.8	2.0	1.40	20.90	22.62	650	950	7.41	16	13	13
16	0.9	0.3		0.8	2.0	1.40	22.10	23.69	750	1050	7.41	15	13	13
19	0.9	0.3	-	0.8	2.0	1.40	23.00	24.80	850	1150	7.41	14	12	12
24	0.9	0.3		0.8	2.0	1.40	26.60	28.82	1050	1400	7.41	13	11	11
30	0.9	0.3	-	0.8	2.0	1.56	28.40	30.34	1250	1700	7.41	12	10	10
37	0.9	0.4		0.8	2.0	1.56	31.00	32.72	1550	2000	7.41	11	10	10

\* If required, these sizes can be offered with stranded conductors also.

THE ABOVE DATA IS INDICATIVE AND MAY BE REVISED WITHOUT PRIOR INFORMATION

BRIMSON®		OR RESISTANCE OF OR HEAVY DUTY CA			CE
SIZE IN SQ. MM.	CONDUCTOR	Max. Cond. Resistance in Ohm/Km at 20°C	SIZE IN SQ. MM.	CONDUCTOR	Max. Cond. Resistance in Ohm/Km at 20°C
* SOLID CONDUCTOR	CONSTRUCTION	SINGLE CORE & MULTICORE	OIZE IN OQ. IIIII.	CONSTRUCTION	SINGLE CORE & MULTICORE
1.5*	1/1.38	12.100	120	37/2.03	0.153
2.5*	1/1.78	7.410	150	37/2.24	0.124
4.0*	1/2.24	4.610	185	37/2.50	0.0991
6.0*	1/2.76	3.080	240	61/2.24	0.0754
10	7/1.35	1.830	300	61/2.50	0.0601
16	7/1.70	1.150	400	61/2.85	0.0470
25	7/2.14	0.727	500	61/3.20	0.0366
35	7/2.50	0.524	630	91/3.00	0.0283
50	7/3.00	0.387			
70	19/2.14	0.268	800	127/2.83	0.0221
95	19/2.50	0.193	1000	127/3.16	0.0176

BRIMSON®	CURRENT RATING OF BRIMSON COPPER ARMOURED/UNARMOURED CABLES 650/1100 V GRADE IN AIR										
AREA SQ. MM.	TWIN CORE AMP.	3, 3.5, 4 CORE AMP.	AREA SQ. MM.	TWIN CORE AMP.	3, 3.5, 4 CORE AMP.						
1.5	20	17	70	195	165						
2.5	27	24	95	230	200						
4	35	30	120	265	235						
6	45	39	150	305	265						
10	60	52	185	350	305						
16	78	66	240	410	355						
25	105	90	300	465	400						
35	125	110	400	530	455						
50	155	135			***						



# **SUBMERSIBLE CABLES**

CE

# **PVC INSULATED FLAT SUBMERSIBLE CABLES**

**BRIMSON** Flat Cable are manufactured for critical space requirement, protection against indefinite immersion in water under specified conditions, protection against rain water and protection against ingress of small solid foreign bodies.

**BRIMSON'S** Flat Cables are produced from best quality electrolytic copper, annealed & bunched on automatic manufacturing machines. The conductors are insulated with a special grade of PVC and outer sheath consists of a highly abrasion resistant PVC compound. These cables are processed on sophisticated twin extrusion line which meets and withstands the demanding needs of submersible pump motor power supply.

3 CO	RE FLA	T CABL		(Generally as	per IS : 694)			
C	ONDUCTO	D	INSULA	ATION	S	HEATH	CONDUCTOR	CURRENT
	CONDUCTOR			ATION	OVERAL	L DIMENSIONS	RESISTANCE	CARRYING
AREA (NOM.) SQ. MM.	NOM.) NO. & SIZE		THICKNESS (NOM.) MM.	CORE DIA. (NOM.) MM.	THICKNESS SIZE (NOM.) (W X T) MM. MM.		@ 20°C (MAX) OHMS/KM.	@ 40°C AMPS.
1.5	22/.03		0.8	3.20	1.20	11.9 x 5.5	12.10	14
2.5	36/.03		0.9	3.85	1.20	13.85 x 6.15	7.41	18
4.0	56/.03		1.0	4.50	1.20	15.8 x 6.8	4.95	26
6.0	84/.03		1.0	5.00	1.20	17.3 x 7.3	3.30	31
10.0	140/.03		1.0	5.90	1.40	20.5 x 8.7	1.91	42
16.0	226/.03	126/.04	1.0	6.95	1.40	23.65 x 9.75	1.21	57
25.0	354/.03	196/0.4	1.2	8.65	2.00	30 x 12.65	0.780	72
35.0	495/0.3	276/.04	1.2	9.90	2.00	33.7 x 13.9	0.554	90
50.0	703/.03	396/.04	1.4	12.10	2.20	40.7 x 16.5	0386	115
70.0	360/.05	360/.05	1.4	13.70	2.20	45.5 x 18.1	0.272	143
95.0	475/.05	485/.04	1.6	15.80	2.40	52.2 x 20.6	0.206	165

NOTE: Insulation thickness, Sheath thickness and overall dimension given in this table are nominal values. The number of wires is pproximate and strand diameter is nominal, they shall be such as to satisfy the requirements of conductor resistance as per IS: 8130 / 1984. 4 CORE FLAT CABLES UPTO 25 SQ. MM. are available against specified order.



# **INSTRUMENTATION CABLES**

(Armoured & Unarmoured)

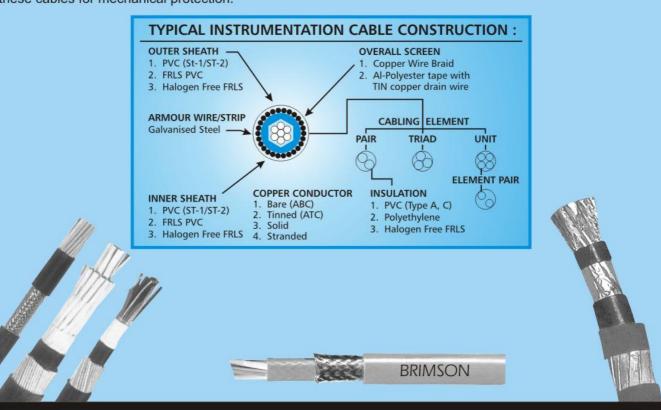


**BRIMSON** Instrumentation Cables ensure Smooth Communication of low level signals from electronic transmitters to the control room. These cables effectively cut down any distortion or cross talk. The superior Aluminium Mylar shielding (optional) ensures almost complete elimination of any noise. These cables are widely used in core industries like Petrochemicals, Steel, Aviation, Fire Alarm Systems, Refineries, pharmaceuticals, Thermal Power Projects, Chemical Plants, Transmission Systems, Computer Controlled Electrical & Electronic Equipments Etc.

Signal cables are imperative when you want to keep the signal to noise ratio and the capacitance to the minimum in presence of stray magnetic fields. They are used in sensitive areas where accurate data inputs are necessary viz. Electronic Industries and Nuclear Power Plants.

RTD (Remote Temperature Detection) cables carry temperature readings from remote or inaccessible areas to the control room.

The growing sophistication of the electronic industry continues to create a need for specially designed cables for use with computer-controlled electrical and electronic equipment. To satisfy requirements for impedance matching, lower bit error rates, lower crosstalk, longer transmission distances and high signal purity, we are manufacturing an expanding spectrum of instrumentation, data and control cables in full range of sizes, insulations of different types, shields types for special installations. We can also armour these cables for mechanical protection.



APPLICATION	TYPE & SIZE	OPTIONS
INSTRUMENTATION SIGNAL CABLES FOR PROCESS CONTROL AND INSTRUMENTS	PVC Sheathed 225/650/1100 V grade cables as per BS: 5308 DIN / VDE 0815 & 816 IS: 1554 / IEC 189 / ENI 0181.00 and Customer Specification Size: 0.2 to 300 Sq. mm.	CONDUCTOR INSULATION SHIELDING Individual elements by Aluminium Polyester Screen with ATC drain wire / overall or alternately copper wire Braid Shielding as specified.  ELEMENTS INNER SHEATH PVC / HR / FR PVC / Zero Halogen  ARMOURED OUTER SHEATH PVC / FR PVC / FRLS / Zero Halogen  - Stranded/Solid, Bare/Tinned/Silver.  - PVC/HR PVC/P. E. / Zero Halogen/Silicone - Individual elements by Aluminium Polyester Screen with ATC drain wire / overall or alternately copper wire Braid Shielding as specified.  - Pair / Triples / Quads, Colour code/Number printed - PVC / HR / FR PVC / Zero Halogen  - G. S. Round Wire/Flat Strip OUTER SHEATH - PVC / FRLS / Zero Halogen



# 100% SCREENED FLEXIBLE CABLES FOIL + BRAID SHIELDED (DUAL SCREENED)



**BRIMSON CABLES PVT. LTD.** manufactures the widest range of shielded cables designed for control, power, data & instrument circuits. When a particular installation is prone to interference from either internal or external sourced, some form of shielding in the cable is necessary. Even if one installs the most accurate and reliable instruments to monitor and control the system will be as strong or as weak as the cable interconnecting them.

In shielded cables, ideally a coverage of around 85% is desired when providing braid shielding but it is often seen that the coverage is hardly in the range of 50% to 60% which leaves the cable cores exposed to all kinds of interferences. Moreover only an aluminium foil or braid shield on its own may not be effective enough to eliminate or reducehe interference problems, hence the need for Dual Screened Cables - wherein both an aluminium foil having 100% coverage (with minimum 25% overlap) in conjunction with shield is provided. Dual Screened is far more effective in the most demanding environments than ordinary screened cables.

### **FEATURES:**

- · Insulated with high grade PVC.
- · Outstanding shield effectiveness.
- 100% Spark, HV, IR, CR tested.

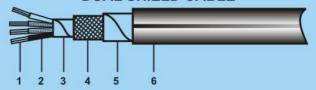
### ADVANTAGES:

- · Easy to handle and terminate.
- · Outstanding electrical properties.
- · Flame retardant, self extinguishing PVC.

### CONSTRUCTION:

- 1. Flexible copper conductor
- 2. PVC insulation / H.R.
- 3. Aluminium-mylar tape shield
- 4. Braid shield
- 5. Polyester tape
- 6. PVC sheath / F.R. / F.R.L.S.

# **DUAL SHIELD CABLE**



# THERMOCOUPLE EXTENSION / COMPENSATIVE CABLE

These cables can also be termed as instrumentation cables, since they are used for process temperature measurement. The construction is similar to paired instrumentation cable but the conductor material is different. Thermocouples are used in processes to sense temperature and is connected to the pyrometers for indication and control. The thermocouple and pyrometers are electrically connected by the thermocouple extension/compensating cables. The conductors used for these cables are required to have similar thermoelectric (emf) properties as that of the thermocouple used for sensing the temperature. The cables are manufactures as per IS: 8784, ANSI- MC 96.1, BS: 1843 ENI, DIN: 43714, NFC: 43-323, JISC: 1610-1981 and customers specification.

## RANGE OF THERMOCOUPLE EXTENSION/COMPENSATING CABLES:

EVTENOION OADLES	CONDUCTOR MATERIAL						
EXTENSION CABLES	POSITIVE	NEGATIVE					
KX (NiCr/Nia)	Nickel - Chromel	Nickel - Alumel					
JX (Fe/CuNi)	Iron Magnetic	Constantan (Copper - Nickel)					
EX (NiCr/CuNi)	Nickel - Chromel	Constantan (Copper - Nickel)					
TX (Cu/CuNi)	Copper	Constantan (Copper - Nickel)					
COMPENSATING CABLES							
KX (A) / VX (NiCr/NiAl)	Copper	Constantan					
SX/RX (PtRh-Pt)	Copper	Constantan					

## COLOUR CODES AS PER VARIOUS STANDARD SPECIFICATIONS.

				STAND	DARDS REF	ERRED					
ANSI-MC - 96.1 • ENI - 163.00				IS: 8784			BS : 1843				
	+ve	-ve	overall	+ve	-ve	overall	+ve	-ve	overall		
EXTENSION CABLES											
KX	Yellow	Red	Yellow	Red	Green	Green	Brown	Blue	Red		
JX	White	Red	Black	Red	Blue	Blue	Yellow	Blue	Black		
TX	Blue	Red	Blue	Red	Black	Black	White	Blue	Blue		
EX	Purple	Red	Purple	Red	Violet	Violet	Brown	Blue	Brown		
COM	PENSATIN	NG CAB	LES	W.							
KX(A)VX				Red	Green	Green	White	Blue	Red		
SX/RX		Black	Red	Red	White	White	White	Blue	Green		

The Above Data Is Indicative And May Be Revised Without Prior Information • Brimson Will Not Be Liable For Any Damages Arising Out Of Incorrect Application



# (TRAILING) TRS (RUBBER) CABLES



IS: 9968 (P-1)88

The word POLYMERS comes from the Greek meaning "MANY + PARTS" and as chemical compound. It is combination of carbon, hydrogen, oxygen, and / or Silicon.

Due to its Physical, Chemical and electrical Characteristic polymers today has turned out to be the only suitable material for application in critical and problem areas. Some polymers conduct electricity very well.

**BRIMSON** Cables Manufactures a wide range of Elastomeric Cables, Elevator (Lift) Cables as per IS: 9968 (Pt-1) specification and are approved / tested by NSIC, RTC, ISI & NTH.

For quality systems BRIMSON CABLES PVT. LTD. has acquired ISO 9001 certification.

Elastomer Cables are used in Steel, Chemicals, Cement Plants, Sugar Factories, Aeronautic Ship, Coal Fields & Oil Refineries, Boilers, Electric Furnase, Driers, Bakeries, High Frequency Generators, Cranes, Machineries, Alloys, Machine Tools, Construction Equipments, Textile Machinery, Printing Press etc.

For cables which can withstand the search aging condition during operations and also to ensure current rating at constant ambient temperature.

Specification: Loco • Ship • Aeronautical Cables as per IEC 92-3, DGS - 211, 212, NVS, DNV, DLW, C/W, RDSO, LLOYDS International Specification.

Types of Rubber Cables: VIR/TRS, E. P. R. / CSP, E. P. R. / PCP, Neoprene, H.O.F.R., Silicone, Butyle Rubber Cables.

# For Selection of right type of Elastomeric Cables, the characteristics are mentioned below:

TYPE OF INSULATION	Maximum Rated Operating Temperature of Conductor in Deg. C	Minimum Ambient Temperature in Deg. C	ure Temperature During								
General Purpose	60	-55	200								
Butyl	85	-50	220								
Ethylene Propylene Rubber (EPR)	90	-50	250								
Polychloroprene (PCP)	90	-50	250								
Nitrile Rubber PVC Blend (NBR-PVC)	90	-30	250								
Chlorosulphonated Polythylene (CP)	90	-35	250								
Silicone Rubber	150	-55	350								

The short circuit temperature mentioned above are based on Intrinsic properties of the insulating material, it is essential that the accessories which are used in the above system with mechanical and soldered connections are suitable for temperature adopted for cables.

are used in the above system with mechanical and soldered confinedions are suitable for temperature adopted for cables.										
	FLEX	XIBLE TRAILING	CABLES	L. Company						
S. NO.	TYPE	IDENTIFICATION	VOLTAGE GRADE	APPLICATION						
1.	Flexible Trailing Cables	FT	1.1 KV Portable m/c	Coal cutlers and similar						
2.	Flexible Trailing Cables	FTD	1.1 KV	Hand held m/c like drill etc.						
3.	Pliable Armoured Flexible Cables	P3 1.1 KV Conveyors, Loaders and similar transportable m/c								
4.	Pliable Armoured Flexible Cables	PC 1.1 KV Remote Control Circuit								
5.	Pliable Armoured Flexible Cables	PL	1.1 KV	For Coal Face Light						
1. a) b)	FT FT3-5 Core FT4-5 Core FT4-5 Core State of the separator FT6-5 Core State of the separator State of the separato									
2.	FTD-3 Core	2 Dayyar Cara I milat a	ava I aaab aasa all 6 aa w	laid around anodle accounter						
a) 3.	P	3 Power Core + pilot o	ore + each core all 6 sq. fr	nm. laid around cradle separator.						
a)	P3-5 Core	3 Power Core + pilot of to 35 sq. mm.	core + each core around	cradle separator cross section						
4.	PC									
a) b)	PC1-2 Core cross section 2.5 sq. mm. PC2-3 Core cross section 2.5 sq. mm.									
<b>5</b> . a) b)	PL PL1-4 Core cross section 4 sq. mm. PL2-5 Core cross section 4 sq. mm.									



# **TRS CABLES**



IS: 9968 (P-1)88

# FAN FLEXIBLE ANNEALED TINNED COPPER CONDUCTOR ELASTOMER INSULATED AND OVERALL COTTON/SILK BRAIDED

Nominal Cross Sectional area	Number & Nominal Dia. of Wires*	Thickness of Insulation (Nom)	Max Overall Diameter (in mm.)		
of conductor (in mm.)	(in mm.)	(in mm.)	2 CORE	3 CORE	
0.5	16/0.20	1.0	8.3	9.0	
0.75	24/0.20	1.0	8.7	9.5	
1.0	32/0.20	1.0	9.1	9.9	
1.5	48/0.20	1.0	9.7	10.5	
2.5	80/0.20	1.0	10.5	11.3	
4.0	128/0.20	1.0	11.7	12.6	

# **CONSTRUCTION DETAILS:**

**CONDUCTOR**: Tinned annealed copper conductor flexible as per IS: 8130.

INSULATION : General purpose natural IE, type.
LAYING : Together twisting in right hand lay.
BRAIDING : Cotton / Stapple / Silk Yarn

**COVERING**: General purpose compound / SE-1, SE-2.

**COLOUR** : Black or as per specification.

# MULTICORE FLEXIBLE COPPER CONDUCTOR General purpose / HOFR / EPR / CSP / Silicon Insulated & sheathed cable.

Nominal Cross	Nominal Thickness		NOMINAL SHEA	ATH THICKNESS	
Sectional area of conductor in mm.	of Insulation (per Core) in mm.	SINGLE CORE in mm.	TWO CORE in mm.	THREE CORE in mm.	FOUR CORE in mm.
0.5	1.00	1.00	1.00	1.00	1.00
0.75	1.00	1.00	1.00	1.00	1.10
1.00	1.00	1.00	1.00	1.00	1.10
1.50	1.00	1.00	1.00	1.10	1.10
2.50	1.00	1.00	1.10	1.10	1.10
4.00	1.00	1.00	1.20	1.20	1.20
6.00	1.00	1.60	2.00	2.10	2.50
10.00	1.20	1.80	2.40	2.50	2.70
16.00	1.20	1.90	2.50	2.70	2.90
25.00	1.40	2.00	3.20	3.30	3.40
35.00	1.40	2.20	3.30	3.40	3.50
50.00	1.60	2.40	3.50	3.60	3.70
70.00	1.60	2.60	3.60	3.70	3.90
95.00	1.80	2.80	3.80	4.00	4.10
120.00	1.80	3.00	4.00	4.10	4.30
150.00	2.00	3.20	4.20	4.30	4.50
185.00	2.20	3.40	4.30	4.50	4.80
240.00	2.40	3.50	4.60	4.80	5.10
300.00	2.60	3.50	4.90	5.10	5.40

Note: \*The number & diameter of conductor strands are for reference only.



# RUBBER INSULATED WELDING CABLE



IS: 9857: 1990

For every type of welding jobs, Welding Cable is essential part of Welding equipments.

It carries current from Power source to the electrode Holder and via the arc of the workpiece and thus helps to make the process complete.

The Conductor are bunched and standard covered with tough Rubber sheath by keeping Polyester tape between conductor and insulation which works as a separator.

**BRIMSON** Welding Cable is Suitable for use where combination of ambient Temperature & temperature rise due to load results a conductor Temperature not exceeding 60°C for general purpose & HOFR compound cables.

# (Heat resisting, Oil resisting & Flame Retardant)

COPPE	R COND	UCTOR		CURRENT RATING OF A MAXIMUM DUTY CYCLE OF							
Conductor	Conductor Num. / Dia of Wires	Radial Thickness	Overall	GENERA	AL PURPOSE I	HOFR Compound Covers					
		of Covering in mm.	Diameter in mm. (App)	85%	60%	20%	85%	30%			
16	510/0.2	2.00	10.0	87	103	179	127	223			
25	796/0.2	2.00	11.5	112	133	230	176	318			
35	1114/0.2	2.00	12.9	140	166	288	213	371			
50	707/0.3	2.20	15.0	181	215	373	269	469			
70	999/0.3	2.40	17.4	222	264	458	335	586			
95	1344/0.3	2.60	19.8	272	224	561	406	709			

Working Voltage: 100 V. • Test Voltage: 1000 V. • Min. Bending Radius: 6 x Cable Diameter.

ALUMIN	IUM CON	DUCTOR		CURRENT RATING OF A MAXIMUM DUTY CYCLE OF						
Conductor	Num. / Dia	Radial Thickness	Overall	GENERA	AL PURPOSE I	HOFR Compound Covers				
in MM²		of Covering in mm.	Diameter in mm. (App)	85%	60%	20%	85%	30%		
25	355/0.3	2.00	11.5	87	103	179	132	223		
35	495/0.3	2.00	12.9	112	133	230	165	278		
50	707/0.3	2.20	15.0	140	166	288	213	358		
70	990/0.3	2.40	17.4	174	206	358	259	436		
95	1344/0.3	2.60	19.8	210	250	434	316	531		
120	1697/0.3	2.80	22.6	247	294	510	368	619		

\*NOTE : The Number & Diameter of conductor and Amps. stands for reference only.

# TELEPHONE & SWITCHBOARD CABLES (ARMOURED & UN-ARMOURED)

**BRIMSON UN-ARMOURED & ARMOURED** high conductivity solid annealed tin copper .51 mm Telephone & Switchboard cables with high density PVC Insulation, Paired, Polyester and Sheathed, PVC Compound, Grey Outer Sheath generally confirming to 'ITD' S/SW 113 C, Armouring IS-1554 (Part-1). It is mainly used in Indoor Telephone wiring, Switchboard wiring & Telephone Exchange & Telecommunication Equipments.

COLOUR SCHEME AS PER ITI D-3003											
No. of Pairs	of Pairs   COLOUR SCHEME   No. of Pairs   COLOUR SCHEME		No. of Pairs	COLOUR SCHEME	No. of Pairs	COLOUR SCHEME					
1	White - Blue	7	Red - Orange	13	Black - Green	19	Blue - Grey				
2	White - Orange	8	Red - Green	14	Black - Brown	20	Orange - Green				
3	White - Green	9	Red - Brown	15	Black - Grey	21	Orange - Brown				
4	White - Brown	10	Red - Grey	16	Blue - Orange	22	Orange - Grey				
5	White - Grey	11	Black - Blue	17	Blue - Green	23	Green - Brown				
6	Red - Blue	12	Black - Orange	18	Blue - Brown	24 25	Green - Grey Brown - Grey				

Note: The same sequence is repeated again 1st layer of 25 Pairs and 2nd layer of the same sequence of 25 Pairs.

The above data is indicative and may be revised without prior information BRIMSON will not be liable for any damages arising out of incorrect application.

WE ALSO MANUFACTURE : Co-Axial Cables & Lan (Local Area Network) Cat-5E and Cat-6 Cables.



# **ELEVATOR & ESCALATOR CABLES**



We at **BRIMSON CABLES** thr`ough our in-house R & D, developed an Elevator Cable according to British Standard to meet the long awaited requirement of Indian Elevator Companies, who are till now importing such cables to fulfill their needs.

We are already supplying Elevator Cables to ECE Industries Ltd. (Elevator Division) Ghaziabad since last four years and according to them our product is a big success for them as it has reduced their cost and time. It is an advantage to have an Indian product so that urgent requirement can be fulfilled on time and the product could be modified according to the customer's need.

### CONSTRUCTION OF CABLE

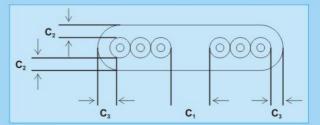
- The Cable shall comprise 3 upto and including 24 flexible conductor with nominal cross-section areas from 0.75mm2 to 2.5mm2.
- The Annealed bare copper conductor complying with the requirement of BS: 6360. The conductor may tinned as required by customer.
- The Insulation consisting of PVC type TI-2 PVC Insulation, complying with the requirement of BS: 6746.
- The Sheath consists of PVC type TM2 PVC sheath complying with the requirement of BS : 6746.
- · The sheath extruded in a single layer on the cores laid parallel.
- · The Composition of the cable according to the nominal cross section area of conductors are as follows.

NOMINAL CROSS-SECTIONAL AREA SQ. MM.	NUMBERS OF CORES
0.75	6,9,12,16,20 & 24
1.00	3,4,5,6,9,12,16,20 & 24
1.50	3,4,5,6,9 & 12,
2.50	3,4,5,6,9 & 12,

The cores are laid parallel in grouped, closely side by side and covered with sheath comply with the following for cables having the preferred numbers of cores.

NUMBERS OF CORES	6	9	12	16	20	24
Number of Groups X Numbers of Cores in each Group	2 x 3	3 x 3	3 x 4	4 x 4	5 x 4	6 x 4

A tearing thread be added inside each core group. It shall be possible to separate the cores without damage to the insulation. Stain bearing thread of textile material may be included in each core group, replacing one or more cores.



## **TEST DESCRIPTION**

### CONSTRUCTIONAL AND DIMENSIONAL TEST.

Check on construction. • Measurement of insulation thickness. • Measurement of sheath thickness.

## MECHANICAL PROPERTIES ON INSULATION

Tensile strength before ageing. • Elongation at break before ageing. • Tensile strength after ageing in air. • Elongation at break after ageing in air. • Loss of mass test. • Hot pressure test. • Cold bend test.

# · MECHANICAL PROPERTIES OF SHEATH

Tensile strength before ageing. • Elongation at break before ageing. • Tensile strength after ageing in air. • Elongation at break after ageing in air. • Loss of mass test. • Cold elongation test. • Cold bend test.

## MECHANICAL STRENGTH OF COMPLETE CABLE

Static flexibility test. • Tensile strength of strain-bearing member.

CONDU	ICTOR	RADIAL THICKNESS	THI	CKNES	S OF	MINIMUM INSULATION	
Nominal Cross- Sectional Area	Maximum Diameter of Wire	OF INSULATION	SHEATH AND CLEARANCES			RESISTANCE AT 70°C	
			C1	C2	СЗ		
mm²	mm	mm	mm	mm	mm	MΩkm	
0.75	0.21	0.6	1.0	0.9	1.5	0.011	
1.00	0.21	0.6	1.0	0.9	1.5	0.010	
1.50	0.26	0.7	1.0	1.0	1.5	0.010	
2.50	0.26	0.8	1.5	1.0	1.8	0.009	

## **TABLE A**

PLAIN COPPER CONDUCTOR, PVC INSULATED UNSHEATHED 650/1100V, SINGLE CORE INDUSTRIAL WIRES & CARLES FOR PANEL POACE WIRES AS PER IS:694/1990 WITH ISI MARK (UPTO 50 SQ. MM)



			/.o	0.00 1/ 1000				ou. mm,					
Area in Sq. mm	Conductor Const. in General	Cond. Dia. in mm	Max. DC Resistance Ohm/Km at 20°C	Nominal Insulation Thickness in mm	Cable Dia (Approx.)	Current Rating in Amps.	AREA IN SQ. MM	Conductor Const. in General	Cond. Dia. in mm	Max. DC Resistance Ohm/Km at 20°C	Nominal Insulation Thickness in mm	Cable Dia (Approx.)	Current Rating in Amps.
0.50	16/0.20	0.94	39.00	0.60	2.20	4	70	354/0.50	12.30	0.272	1.6	15.5	170
0.75	24/0.20	1.20	26.00	0.60	2.50	7	95	484/0.50	14.70	0.206	1.8	18.5	210
1.00	32/0.20	1.34	19.50	0.60	2.60	11	120	608/0.50	16.70	0.161	2.0	20.9	235
1.50	48/0.20	1.64	13.30	0.60	2.90	14	150	750/0.50	18.30	0.129	2.0	22.5	295
2.50	80/0.20	2.08	7.98	0.70	3.50	19	185	925/0.50	20.00	0.106	2.2	24.6	330
4.00	56/0.30	2.61	4.95	0.80	4.30	26	240	1210/0.50	23.00	0.0801	2.2	27.6	400
6.00	84/0.30	3.50	3.300	0.80	5.30	33	300	1527/0.50	27.20	0.0641	2.4	32.2	475
10.00	80/0.40	4.60	1.910	1.00	6.70	45	400	2036/0.50	30.50	0.0486	2.6	35.7	550
16.00	126/0.40	6.00	1.210	1.00	8.20	60							
25.00	196/0.40	7.60	0.780	1.20	10.00	75				by IS:694			
35.00	276/0.40	8.70	0.554	1.20	11.3	95			IS-2465.				
50.00	396/0.40	10.60	0.386	1.40	13.5	125							

## **TABLE B**

# BRIMSON®

# MULTICORE ROUND INDUSTRIAL CABLE (6 CORES TO 30 CORES) **GENERALLY CONFIRMING TO IS:694/1990**





Area SQ. MM.         0.50         0.75         1.00         1.50         2.50         4.00           No. of Strands / Nominal Dia.         16/0.2         24/0.2         32/0.2         48/0.20         86/0.3         56/0.3           Conductor Dia in mm         0.94         1.20         1.34         1.64         2.08         2.61           Average Insulation thickness 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           NO. OF CORES         3         3.50         4.30         3.50         4.30         4.30           NO. OF CORES         3         4.90         1.00         1.00         1.00         1.10         1.20         1.20           App. Overall Dia mm         8.50         9.50         9.80         10.70         12.70         15.30         1.20								
Conductor Dia in mm	Area SQ	. MM.	0.50	0.75	1.00	1.50	2.50	4.00
Average Insulation thickness mm   0.60   0.60   0.60   0.60   0.70   0.80	No. of St	rands / Nominal Dia.	16/0.2	24/0.2	32/0.2	48/0.20	80/0.20	56/0.3
Core Dia in mm         2.20         2.50         2.60         2.90         3.50         4.30           NO. OF CORES         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           App. Overall Dia mm         8.50         9.50         9.80         10.70         12.70         15.30           8         Ayg. Sheath thickness mm         1.00         1.00         1.00         1.10         1.20         1.30           8         Avg. Sheath thickness mm         1.00         1.00         1.00         1.10         1.20         1.30           10         Avg. Sheath thickness mm         1.00         1.10         1.10         1.10         1.10         1.10         1.40         1.40           12         Avg. Sheath thickness mm         1.00         1.10         1.10         1.10         1.10         1.30         1.40           14         App. Overall Dia mm         11.20         12.60         13.30         14.30         17.20         20.70           14         App. Overall Dia mm         12.00         13.30         13	Conducto	or Dia in mm	0.94	1.20	1.34	1.64	2.08	2.61
NO. OF CORES	Average	Insulation thickness mm	0.60	0.60	0.60	0.60	0.70	0.80
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           8         Avg. Sheath thickness mm         1.00         1.00         1.00         1.10         1.20         1.30           8         Avg. Sheath thickness mm         1.00         1.00         1.00         1.10         1.20         1.30           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         1.10         1.10         1.10         1.10         1.30         1.40           4         Avg. Sheath thickness mm         1.10         1.10         1.10         1.20         1.30         1.40           4         Avg. Sheath thickness mm         1.10         1.20         1.30         1.40         1.5	Core Dia	in mm	2.20	2.50	2.60	2.90	3.50	4.30
6         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           4         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         1.10         1.10         1.10         1.10         1.30         1.40           4         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         1.4	NO. OF	CORES						
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         8       Avg. Sheath thickness mm       1.00       1.00       1.00       1.10       1.20       1.30         8       Avg. Sheath thickness mm       1.00       1.00       1.00       1.10       1.20       1.30         10       Avg. Sheath thickness mm       1.00       1.10       1.10       1.10       1.30       1.40         12       Avg. Sheath thickness mm       1.00       1.10       1.10       1.10       1.30       1.40         12       Avg. Sheath thickness mm       1.10       1.10       1.10       1.10       1.30       1.40         14       Avg. Sheath thickness mm       1.10       1.10       1.10       1.20       1.30       1.40         16       Avg. Sheath thickness mm       1.10       1.20       1.20       1.40       1.50         19       Avg. Sheath thickness mm       1.10       1.20       1.30       1.40       1.50         24       Avg. Sheath thickness mm       1.10       1.20       1.30	e	Avg. Sheath thickness mm	0.90	1.00	1.00	1.00	1.10	1.20
7         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           10         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           4pp. Overall Dia mm         12.00         13.30         13.70         15.20         18.10         21.80           4pp. Overall Dia mm         12.60         14.20         14.60         16.00         19.30         23.20	0	App. Overall Dia mm	8.50	9.50	9.80	10.70	12.70	15.30
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         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	7	Avg. Sheath thickness mm	0.90	1.00	1.00	1.00	1.10	1.20
8       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         24       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	•	App. Overall Dia mm	8.50	9.50	9.80	10.70	12.70	15.30
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         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         App. Overall Dia mm       15.60       17.60       18.20       20.20       23.80       28.80 <td>0</td> <td>Avg. Sheath thickness mm</td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td>1.10</td> <td>1.20</td> <td>1.30</td>	0	Avg. Sheath thickness mm	1.00	1.00	1.00	1.10	1.20	1.30
10       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         App. Overall Dia mm       12.60       14.20       1.20       1.20       1.40       1.50         App. Overall Dia mm       12.60       14.20       14.60       16.00       19.30       23.20         Paper Dia mm       13.20       14.90       15.60       17.10       20.30       24.50         App. Overall Dia mm       13.20       14.90       15.60       17.10       20.30       24.50         App. Overall Dia mm       15.60       17.60       18.20       20.20       23.80       28.80         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50	ð	App. Overall Dia mm	9.30	10.40	10.70	11.90	14.10	16.90
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         App. Overall Dia 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         App. Overall Dia mm       13.20       14.90       15.60       17.10       20.30       24.50         App. Overall Dia mm       15.60       17.60       18.20       20.20       23.80       28.80         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50	40	Avg. Sheath thickness mm	1.00	1.10	1.10	1.10	1.30	1.40
12       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         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         App. Overall Dia mm       13.20       14.90       15.60       17.10       20.30       24.50         App. Overall Dia mm       13.20       14.90       15.60       17.10       20.30       24.50         App. Overall Dia mm       15.60       17.60       18.20       20.20       23.80       28.80         Avg. Sheath thickness mm       1.30       1.30       1.40       1.40       1.50         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50	10	App. Overall Dia mm	10.80	12.20	12.60	13.80	16.60	20.00
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         App. Overall Dia 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         App. Overall Dia mm       13.20       14.90       15.60       17.10       20.30       24.50         App. Overall Dia mm       15.60       17.60       18.20       20.20       23.80       28.80         Avg. Sheath thickness mm       1.30       1.30       1.40       1.40       1.50         Avg. Sheath thickness mm       15.60       17.60       18.20       20.20       23.80       28.80         Avg. Sheath thickness mm       1.30       1.30       1.40       1.40       1.50	Avg. Sheath thickness mm		1.00	1.10	1.10	1.10	1.30	1.40
14       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         4pp. Overall Dia mm       1.10       1.20       1.30       1.30       1.40       1.50         App. Overall Dia 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         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50	12	App. Overall Dia mm	11.20	12.60	13.00	14.30	17.20	20.70
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         Avg. Sheath thickness mm       1.10       1.20       1.30       1.30       1.40       1.50         App. Overall Dia mm       1.20       1.30       1.30       1.40       1.40       1.50         Avg. Sheath thickness mm       1.50       17.60       18.20       20.20       23.80       28.80         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50		Avg. Sheath thickness mm	1.10	1.10	1.10	1.20	1.30	1.40
16       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         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50	14	App. Overall Dia mm	12.00	13.30	13.70	15.20	18.10	21.80
App. Overall Dia mm       12.60       14.20       14.60       16.00       19.30       23.20         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         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         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50	46	Avg. Sheath thickness mm	1.10	1.20	1.20	1.20	1.40	1.50
19     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       Avg. Sheath thickness mm     1.30     1.30     1.30     1.40     1.40     1.50	10	App. Overall Dia mm	12.60	14.20	14.60	16.00	19.30	23.20
App. Overall Dia mm 13.20 14.90 15.60 17.10 20.30 24.50  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  Avg. Sheath thickness mm 1.30 1.30 1.30 1.40 1.40 1.50	10	Avg. Sheath thickness mm	1.10	1.20	1.30	1.30	1.40	1.50
24     App. Overall Dia mm     15.60     17.60     18.20     20.20     23.80     28.80       Avg. Sheath thickness mm     1.30     1.30     1.30     1.40     1.40     1.50	19	App. Overall Dia mm		14.90	15.60	17.10	20.30	24.50
App. Overall Dia mm       15.60       17.60       18.20       20.20       23.80       28.80         Avg. Sheath thickness mm       1.30       1.30       1.30       1.40       1.40       1.50	24	Avg. Sheath thickness mm	1.20	1.30	1.30	1.40	1.40	1.50
30	24	App. Overall Dia mm		17.60	18.20	20.20	23.80	28.80
App. Overall Dia mm 16.80 18.70 19.30 21.50 25.70 30.60	20	Avg. Sheath thickness mm	1.30	1.30	1.30	1.40	1.40	1.50
	30	App. Overall Dia mm	16.80	18.70	19.30	21.50	25.70	30.60
Max. Conductor Resistance in Ohm/Km at 20°C. 39.00 26.00 19.50 13.30 7.98 4.95		Max. Conductor Resistance in Ohm/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		Recommended Current Rating in AMP	4	7	11	14	19	26

THE ABOVE DATA IS INDICATIVE AND MAY BE REVISED WITHOUT PRIOR INFORMATION. BRIMSON CABLES PVT. LTD. WILL NOT BE LIABLE FOR ANY DAMAGES ARISING OUT OF INCORRECT APPLICATION.

## TABLE C



# BARE COPPER CONDUCTOR, PVC INSULATED AND SHEATHED 650/1100V, MULTICORE INDUSTRIAL CABLES AS PER IS:694/1990 WITH ISI MARK





NOMINAL AREA	NO. OF STRANDS /	MAX. DC RESISTANCE OHM/KM	NOMINAL INSULATION	CORE DIA	NOMINAL SHEATH THICKNESS IN MM		OVERALL DIAMETER IN MM (APPROX.)			CURRENT	
IN SQ. MM	NOMINAL DIA.	AT 20°C	THICKNESS IN MM	MM	2 CORE	3 CORE	4 CORE	2 CORE	3 CORE	4 CORE	RATING
0.50	16/0.20	39.00	0.60	2.20	0.90	0.90	0.90	6.20	6.60	7.20	4
0.75	24/0.20	26.00	0.60	2.50	0.90	0.90	0.90	6.80	7.20	7.90	7
1.00	32/0.20	19.50	0.60	2.60	0.90	0.90	0.90	7.00	7.50	8.10	11
1.50	48/0.20	13.30	0.60	2.90	0.90	0.90	1.00	7.60	8.10	9.00	14
2.50	80/0.20	7.98	0.70	3.50	1.00	1.00	1.00	9.00	9.60	10.50	19
4.00	56/0.30	4.95	0.80	4.30	1.00	1.00	1.00	10.60	11.30	12.40	26

# TABLE D



# PLAIN COPPER CONDUCTOR, PVC INSULATED AND SHEATHED 650/1100V, MULTICORE INDUSTRIAL CABLES





NOMINAL AREA IN SQ.	NO. OF STRANDS / NOMINAL	MAX. DC RESISTANCE OHM/KM	NOMINAL INSULATION THICKNESS	CORE DIA	NOMINAL SHEATH THICKNESS IN MM		OVERALL DIAMETER IN MM (APPROX.)			CURRENT RATING	
MM	DIA.	AT 20°C	IN MM	MM	2 CORE	3 CORE	4 CORE	2 CORE	3 CORE	4 CORE	KATING
6	84/0.3	3.30	0.80	5.10	1.15	1.15	1.40	12.60	13.40	15.20	33
10	80/0.4	1.91	1.00	6.60	1.40	1.40	1.40	16.00	17.00	18.80	45
16	126/0.4	1.21	1.00	8.00	1.40	1.40	1.40	18.80	20.10	22.20	60
25	196/0.4	0.780	1.20	10.00	2.00	2.00	2.00	24.00	25.60	28.20	75
35	276/0.4	0.554	1.20	11.10	2.00	2.00	2.00	26.30	28.00	31.00	95
50	396/0.4	0.386	1.40	13.40	2.00	2.00	2.00	30.90	33.00	36.50	125
70	354/0.5	0.272	1.40	15.10	2.00	2.20	2.40	34.20	37.00	41.00	170
95	484/0.5	0.206	1.60	17.90	2.20	2.40	2.40	40.20	43.50	47.80	210

Please Note: As per the International practice which is also adopted by Bureau of Indian Standards, the diameter of the conductor shown above is nominal. The Size of the conductor is determined by its resistance. The construction of the conductor is as per market convention and should be treated as a guideline only. It may vary within the limits of IS 8130 with its related classes & Tables.

# WE ALSO DEAL IN: **TEFLON & FIBER GLASS CABLES**



# **XLPE LT POWER CABLES**



IS 7098 (Part-1)

**BRIMSON CABLES PVT. LTD.** is manufacturing Copper / Aluminium conductor cables with PVC or XLPE insulation laid up, inner wrapped / Extruded. The Armouring is of galvanised mild steel wires/strips. The final outer sheath

PE is made up of long molecular chains, by cross-linking of these chains a network of strong bonds is created and PE is converted into cross-linked polyethylene, (XLPE).

XLPE Cables use XLPE Compound with Anti Oxident stablizers and tracks of aromatic polynuclear hydrocarbon, thus improving Electrical treeing characteristics and mechanical strength.

# COMPARISONS OF PROPERTIES DUE TO WHICH XLPE IS SUPERIOR:

CHARACTERISTICS	PVC	XLPE
Tensile Strength(N / mm²)	12.5	15
Flexibility at 10°C	Poor	Good
Volume Resistivity (ohms /min.) (20°C)	10 <sup>13</sup>	1017
Permitivity (50 Hz, 20°C)	4-6	2.3
Max. Conductor Temperature	70°C	90°C
Thermal Resistivity of Dielectric	650°C cm/watt	350°C cm/watt
Max Short Circuit Temp.	160°C	250°C
Dielectric Loss Factor (50 Hz, 20°C)	0.05-0.07	0.0004
Resistance to moisture/Fungus Oil / Solvent / Acid / Alkaline	Medium	Excellent

## **ADVANTAGES OF XLPE CABLES:**

- 1. Higher Current & Short Circuit Rating.
- 2. Higher Insulation resistance 1000 times more than PVC cables, Longer service life.
- 3. XLPE Cable installation is easy due to light weight & small diameter, so requiring less size of cable trays.
- 4. Low Dielectric loss is a significant advantage.
- 5. Because of the thermo setting process taking place due the effect of cross linking. The oracle resistance is increased.
- The thermal resistivity of cross linked material is low compared to PVC.
- 7. Resistance to Acids, Alkalines is outstanding.
- 8. The compound does not produce halogen, The adverse environmental influence.

# Comparative Ratings of 650/1100 V Multicore heavy duty PVC Insulated Cables & XLPE Insulated Cables. 3,3.5 & 4 Core Unarmoured / Armoured PVC Sheathed Cables with Aluminium Conductor.

NOMINAL		Core PVC Insus as per IS-1554	lated & Sheathed (Part-1) 1988	3, 3.5 & 4 Core XLPE Insulated & Sheathed cables as per IS-7098 (Part-1) 1988			
SIZE OF CABLE	IN GROUND	IN AIR	APPROX VOLTAGE DROP	IN GROUND	IN AIR	APPROX VOLTAGE DROP	
SQ. MM.	AMP.	AMP.	MV / AMP / MTR	AMP.	AMP.	MV / AMP / MTR	
16	60	51	4	73	70	4.2	
25	76	70	2.5	94	96	2.7	
35	92	86	1.8	113	117	1.9	
50	110	105	1.3	133	142	1.4	
70	135	130	0.93	164	179	0.99	
95	165	155	0.68	196	221	0.72	
120	185	180	0.54	223	257	0.58	
150	210	205	0.46	249	292	0.48	
185	235	240	0.38	282	337	0.39	
240	275	280	0.28	326	399	0.31	
300	305	315	0.25	367	455	0.26	
400	335	375	0.20	420	530	0.21	















Product	Size / Area	Specification
PVC POWER CABLES	1.5 to 400 Sq. mm.	Conf. IS: 1554 Part-1/88 & IEC 60227-1
PVC CONTROL CABLES	Upto 44 Core & upto 300 Sq. mm.	Conf. IS: 1554 Part-1/88
PVC FLEXIBLE CABLES	Upto Multicore-24C x 50 Sq. mm. Upto 1C x 630 Sq. mm.	Conf. IS: 694/90 & IEC 60227-2
PVC HOUSE WIRING CABLES	All sizes (Multistrand)	As per IS : 694/90 & IEC 60227-2
INSTRUMENTATION CABLES	As per requirements	As per IS : 5026 / 5608 & IEC 60227-2
TELEPHONE CABLES	Flexible (Unarmoured) & Armoured	Conf. ITD :113-B, 114-B, 113-C, 129-C.
SUBMERSIBLE CABLES	Upto 3C x 120 Sq. mm.	Conf. IS: 694/90 & IEC 60227-3
CO-AXIAL CABLES	RG & UR Series (Unarmoured & Armoured)	Conf. BS : 2316, ASTM, MIL-C-17
TWIN FLAT CABLES	Upto 16 Sq. mm.	Conf. IS: 694/90
WEATHER PROOF CABLES	As per requirements	Conf. IS: 694/90
ELEVATOR CABLES	Upto 24C x 2.5 Sq. mm.	Conf. BS: 6977 & IEC 60227-5
TRS / E. P. R. / P. C. P. / C. S. P. H.O.F.R. / Silicon Rubber Cables	Upto 4 x 120 Sq. mm.	Conf. IS : 9968 Part-1
WELDING CABLES Copper/Aluminium	Upto 120 Sq. mm.	Conf. IS 9857 (1990)

F.R., F.R.L.S., Z.H.F.R. or any other type of Cables as per Customer's specification.



Our most of the products are certified, approved, tested and regularised by :









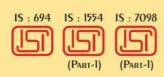








Electricity is born for life, but it should be used safely...









# **OUR PRESTIGIOUS CUSTOMERS:**

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- SAIL BALCO MES HUDA UPSEB RSEB CSEB Central Railway
- BSNL Indian Oil (Digboi Refinery) West Bengal Agro Industries
- Visakhapatnam Port Trust Ferro Scrap Nigam Ltd. (PEN)
- Gujarat Industrial Power Co. Ltd. (GIPCL) National Textiles Corp. (NTC)
- » Bank Sector:
- Citibank HSBC Yes Bank ABN-Amro Punjab National Bank
- » Exporters:
- Bhutan Power Corporation
- Ethiopia Finchha Sugar Pvt. Ltd. (Project by : Kirloskar Bros. Ltd.)
- EGYPT Government Water Department Project by : Kirloskar Bros. Ltd.)
- » Sugar Factory:
- · Vasantdada Sahakari Maka Prakriya Karkhana
- » Corporate
  Sector :
- Lupin Tata Power Co. Air India Thermex Tata Viston Voltas
- Reliance Biotech (IPCL) Corp. Alfa Lavel Reliance Industries Ltd.
- Kodak House Kirloskar Bros. Ltd. Kirloskar Oil Engines Ltd. Atul Ltd.
- Mahindra & Mahindra ECE Industries Shipping Corporation of India
- Manikgarh Cement Coca Cola ESPN Sports I.T.C. Ltd. Cummins (I) Ltd.
- Thyssen Krupp Sterlite Industries Gujarat Ambuja Cement Limited
- Suzlon Energy Ltd. Neyveli Lignite Corp. Ltd. Hindustan Aeronautics Ltd.
- » Builders & Developers :
- Shapoorji Pallonji & Co. Ltd. (Godrej Const. Div.)
   Hawre Constructions
- Lokhandwala Builders Chamunda Developers Rustomji Group
- Patidar Developers Pratibha Developers

Somethings are so clear and pure that you can blindly trust them ..... like us!

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