



**Unmatched offerings for  
application critical industries**



Cabletronics Pvt. Ltd.

# Chetan<sup>®</sup>



## VISION

To constantly persevere for perfection in our chosen field of endeavour by setting new precedents, by breaking new ground and by innovating, and thereby heralding the future in Wires and Cables rather than adapting to it.



## MISSION



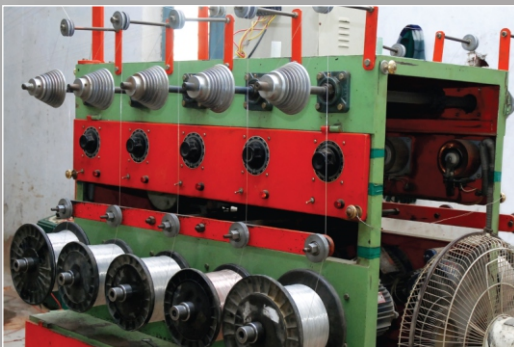
To build upon our heritage of trust, loyalty and integrity. To constantly foster growth through leadership without compromising on excellence, dedication and competence. To constantly add value to our solutions through affordability while maintaining impeccable quality standards.



Synergy is about integrating varied offerings into a complete systems solution more powerful than the sum of its parts. At Chetan Cabletronics this belief underlies core of our business model. We combine industry's most advanced solutions in electronic wires, cables and accessories with mission critical service benchmarks, to bring customers more products with more technical advantage.

Chetan Cabletronics has the branded products and the expertise that today's advanced technology companies have come to rely on in their most critical applications – from the Multicore Round Cable, Flexible Cable and VGA Cables to CCTV Cable, Cat 5 cable, speaker cable Products, our offerings are the preferred choice for Computer Telecommunication, Medical, Semiconductor Equipment Manufacturing, Industrial Automation and other application critical industries.

Indeed, thanks to our unflinching quality and reliability standards, we have carved a distinct niche for ourselves, in electronic wires, cables, connectors, sleeves and panel accessories.



**INNOVATION IS NOT AN OPTION. IT'S THE ONLY WAY**

**W**hen dependability and quality are of critical importance, when safety and security are the prerequisites, we rise to the occasion by offering a most comprehensive solution bouquet, which defines the industry standard for performance, quality and reliability. And it's been a way of life for us for more than one and half decades. We have never stopped building on this foundation. In today's high speed, digital world, we bring technical expertise, industry-specific solutions, a commitment to new product development and loyalty to customers. We have a bequest of helping customers meet production and manufacturing challenges with cutting edge solutions. The skills gained through this experience, combined with process knowledge gathered by our in-house research and development, enable us to help customers adapt to future technologies – whatever that future is.



Indeed, innovation has been and will always be our guiding principle. Enabling us to create superior products for specific markets and customized systems solutions for the customers we serve. It means doing things more efficiently to achieve new goals and breakthroughs in every aspect of our business.

### **PROMISES FLAWLESS QUALITY, DELIVERS MORE THAN EXPECTATIONS**

**W**e don't strive to confirm to global quality Norms. We strive to surpass them. It is this very principle that enables us to constantly set new quality benchmarks for others to follow. We use only the best of materials and equipment complemented by unique and stringent quality checks at every stage of the manufacturing process.



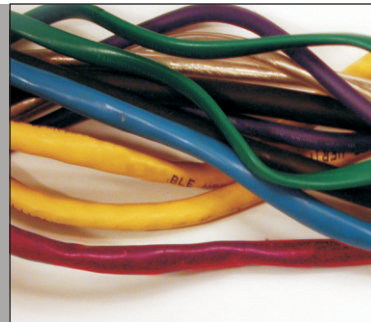
Our success saga is backed by ISO 9001:2000 certification, for quality management, since 2005, ISO 14001:2004 certification, for best environmental practices. In the process, we have won renown, globally for insuring superior systems reliability in our chosen field of endeavour.



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## SUPERIOR INFRASTRUCTURE. UNMATCHED CAPABILITIES



**W**e have achieved the perfect equilibrium between man and machine to manufacture a range of world class wires & cables for our quality savvy clients. Every step is executed by employing the latest standardized machines manned by a team of well trained professionals. We also have an advanced laboratory to conduct various tests and to carry out research and development related activities.



Our fully integrated plant for manufacturing unit of wires and cables is based out of Chopanki Bhiwadi, Rajasthan. Our resource chain includes giants like Hindalco, Sterlite and HCL for copper and Reliance and Shriram Polytech for PVC resin. The actual capacity of these extruders is more than 50,000 Mtrs. per hour. Our testing lab enjoys the IS:694:1990 certification and the entire testing process complies with international standards.

We also manufacture cables as per ROHS standards to cater our European and American clients. Our tinning and silver plating plants produce material as per ROHS standards.

## RENEWED THRUST IN TELECOM. REINVIGORATION IN AUTOMOBILES

**T**he telecom and automobile sectors are both experiencing a boom, hitherto unseen. However the wire and cable applications in these industries have to constantly adapt to changing trends and exacting demands of the major players. We at Chetan, have already established our credentials in these sectors, where change is the only constant. As a part of our strategic growth efforts, we plan a renewed thrust in both these areas with new, custom designed products which fit and suit diverse requirements. Here is a glimpse of our proposed solution basket for these two industries:

### Telecom

RF cable assemblies • Mobile phone-PC data cables • Telecom aerial cables • Networking cables  
• CAT 6 cable • CAT 5E cables • Phone cords

### Automobile

• Automotive wire • Power cords • Jumper cables • Automotive battery terminals



03

**PRODUCT PORTFOLIO : YOU NAME IT. WE HAVE IT**

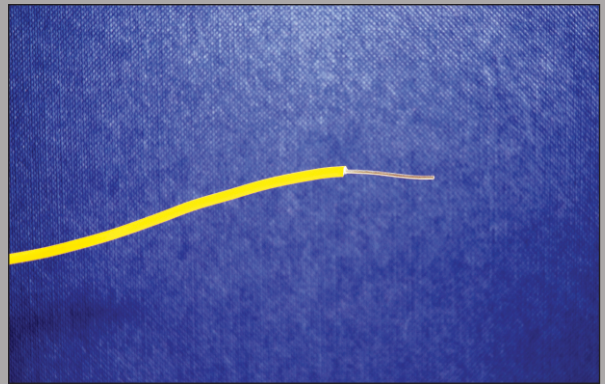
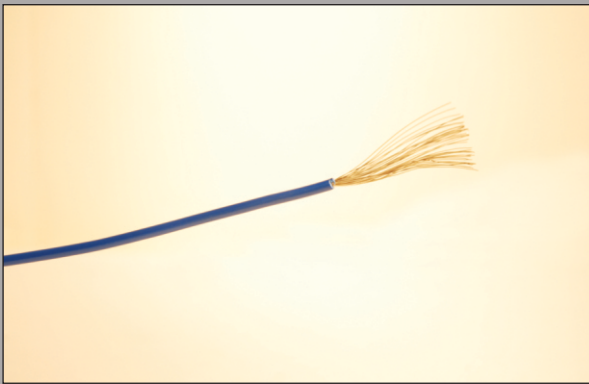
**W**e have the right product for the right application. Our wide-spanning product roster has both width and depth. Allowing you to source diverse offerings for diverse applications, under one roof.



## HOOK UP AND FLEXIBLE WIRES



We provide a host of hook-up and flexible wire offerings which find application in inter-connection circuits, internal wiring of computer and data processing equipment, appliances, lighting, motor leads, heating and cooling equipment, harness fabrication and automotive industry. Our hook-up and flexible wires are available in a range of shades and packages. You may source them off the shelf from our distributors or have them custom-ordered if you have a special requirement.



## FLEXIBLE CABLES



**FLEXIBLE WIRES (Table - 1)**

S. No.	No. of Strands SWG	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in mm <sup>2</sup>	Overall dia. in mm	Max. Conductor Resistance ohm/km at 20°C
1	105/46 SPC	105	0.06	0.297	1.8	66.99
2	14/44 SPC	14	0.08	0.07	0.8	250
3	14/44 ATC	14	0.08	0.07	0.8	250
4	40/44 ABC	40	0.08	0.201	1.15	95.21
5	60/44 ATC	60	0.08	0.301	1.6	65.5
6	120/44 ATC	120	0.08	0.603	1.9	32.6
7	55/43 SPC	55	0.09	0.35	1.6	56
8	110/43	110	0.09	0.699	1.9	28
9	7/42 Thin	7	0.1	0.055	0.7	350.5
10	7/42 (501)	7	0.1	0.055	1.2	350.5
11	19/42	19	0.1	0.149	1.35	134.6
12	23/42	23	0.1	0.181	1.6	135.88
13	90/42 BC	90	0.1	0.707		27.9
14	200/42 SPC	200	0.1	1.57	4.5	12.66
15	14/40	14	0.12	0.158		121.65
16	7/39 (502)	7	0.13	0.093	1.15	209.3
17	7/39	7	0.13	0.093	1.5	209.3
18	14/39	14	0.13	0.186	1.8	104.7
19	23/39	23	0.13	0.305	2.25	64.2
20	40/39	40	0.13	0.531		40.5
21	7/38	7	0.15	0.121	1.4	157.9
22	14/38	14	0.15	0.217	1.6	79
23	14/38 (H)	14	0.15	0.217	1.9	79
24	20/38 ABC	20	0.15	0.353	2.1	55.5
25	23/38	23	0.15	0.406	2.2	48
26	7/37 (503)	7	0.17	0.159	1.25	121.5
27	7/37 (504)	7	0.17	0.159	1.4	121.5
28	14/37(505)	14	0.17	0.318	1.55	61
29	7/36	7	0.19	0.198	1.4	97.8
30	14/36	14	0.19	0.397	1.75	49
31	23/36	23	0.19	0.652	2.4	29.83
32	40/36	40	0.19	1.134	2.75	17.2

**Table - 2**

S. No.	No. of Strands SWG	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in mm <sup>2</sup>	Overall dia. in mm	Max. Conductor Resistance ohm/km at 20°C
1	7/0.200	7	0.2	0.22	1.4	88.3
2	16/0.200	16	0.2	0.502	1.9	40.1
3	21/0.200	21	0.2	0.754	2.1	26
4	32/0.200	32	0.2	1.005	2.5	20
5	48/0.200	48	0.2	1.507	2.95	13.7
6	80/0.200	80	0.2	2.512	4	8.21
7	128/0.200	128	0.2	4.019	5	5.09
8	85/0.200	85	0.3	6.005	5	3.39
9	100/0.300	100	0.3	7.065	6	2.89
10	140/0.300	140	0.3	9.891	7	1.95

## HOOK UP WIRES

S. No.	No. of Strands SWG	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in mm <sup>2</sup>	Overall dia. in mm	Conductor Resistance (ohm/km) at 20°C
1	1/31 TH	1	0.295	0.068	0.7	267.5
2	1/30.	1	0.315	0.078	1	234.63
3	1/28.	1	0.37	0.107	1.15	170.06
4	1/26.	1	0.45	0.159	1.15	114.97
5	1/25.	1	0.508	0.203	1.2	90.21
6	1/23.	1	0.61	0.292	1.5	62.57
7	1/22.	1	0.71	0.396	1.7	46.18
8	1/20.	1	0.91	0.65	2.25	28.11

We can also manufacture the product as per your specification and need.  
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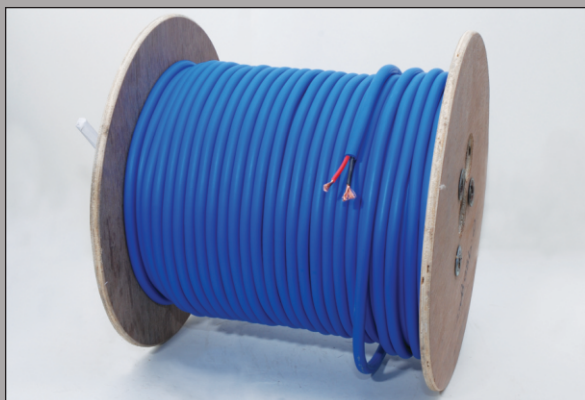
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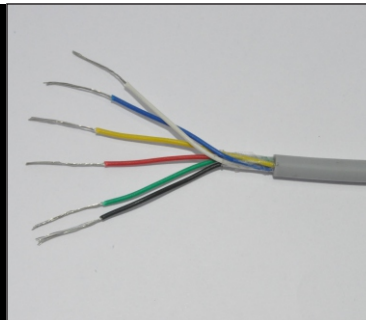
## MULTICORE ROUND CABLES



Right from High and Low Temperature versions to a variety of gauge sizes, dimensions, and insulation materials, shielding configurations, and jacketing materials, our multi core cables are available in an ever expanding range of choices. These cables meet the scientific and industrial demands of varied users and systems including computers, communications, instrumentation, sound, control, audio and data transmission. Each of these cables is designed to protect signal fidelity under decisive environments by reducing hum, noise, and crosstalk.



## MULTICORE ROUND CABLES



### Multicore Rounded Cable (7/0.190)-----7/36

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	7	0.19	0.198	4	95.45
2	3	7	0.19	0.198	4.5	95.45
3	4	7	0.19	0.198	4.9	95.45
4	5	7	0.19	0.198	5.2	95.45
5	6	7	0.19	0.198	5.5	95.45
6	8	7	0.19	0.198	5.8	95.45
7	10	7	0.19	0.198	6.5	95.45
8	12	7	0.19	0.198	7	95.45
9	16	7	0.19	0.198	7.8	95.45
10	18	7	0.19	0.198	8.4	95.45
11	20	7	0.19	0.198	8.7	95.45
12	25	7	0.19	0.198	9.2	95.45

### Multicore Rounded Cable (7/0.150)-----7/38

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	7	0.15	0.124	3.2	155.85
2	3	7	0.15	0.124	4	155.85
3	4	7	0.15	0.124	4.35	155.85
4	5	7	0.15	0.124	4.7	155.85
5	6	7	0.15	0.124	5.1	155.85
6	7	7	0.15	0.124	5.35	155.85
7	8	7	0.15	0.124	5.6	155.85
8	9	7	0.15	0.124	5.85	155.85
9	10	7	0.15	0.124	6.2	155.85
10	12	7	0.15	0.124	6.5	155.85
11	14	7	0.15	0.124	6.9	155.85
12	15	7	0.15	0.124	7.1	155.85
13	16	7	0.15	0.124	7.35	155.85
14	18	7	0.15	0.124	7.7	155.85
15	20	7	0.15	0.124	8.1	155.85
16	25	7	0.15	0.124	8.6	155.85
17	30	7	0.15	0.124	9.35	155.85
18	36	7	0.15	0.124	9.8	155.85
19	50	7	0.15	0.124	11.7	155.85

### Multicore Rounded Cable (7/0.130)-----7/39

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	7	0.13	0.0923	3.2	206.83
2	3	7	0.13	0.0923	4	206.83
3	4	7	0.13	0.0923	4.35	206.83
4	5	7	0.13	0.0923	4.7	206.83
5	6	7	0.13	0.0923	5.1	206.83
6	7	7	0.13	0.0923	5.35	206.83
7	8	7	0.13	0.0923	5.6	206.83
8	9	7	0.13	0.0923	5.85	206.83
9	10	7	0.13	0.0923	6.2	206.83
10	12	7	0.13	0.0923	6.5	206.83
11	14	7	0.13	0.0923	6.9	206.83
12	15	7	0.13	0.0923	7.1	206.83
13	16	7	0.13	0.0923	7.35	206.83
14	18	7	0.13	0.0923	7.7	206.83
15	20	7	0.13	0.0923	8.1	206.83
16	25	7	0.13	0.0923	8.6	206.83
17	30	7	0.13	0.0923	9.35	206.83
18	36	7	0.13	0.0923	9.8	206.83
19	50	7	0.13	0.0923	11.7	206.83

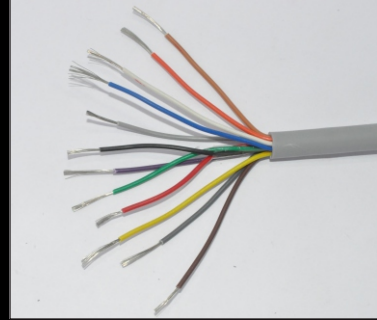
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## MULTICORE ROUND CABLES



### Multicore Rounded Cable (14/0.150)-----14/38

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	14	0.15	0.247	4	77.93
2	3	14	0.15	0.247	4.5	77.93
3	4	14	0.15	0.247	4.7	77.93
4	5	14	0.15	0.247	5.2	77.93
5	6	14	0.15	0.247	5.5	77.93
6	8	14	0.15	0.247	6.45	77.93
7	10	14	0.15	0.247	6.8	77.93
8	12	14	0.15	0.247	7.4	77.93
9	15	14	0.15	0.247	8.2	77.93
10	16	14	0.15	0.247	8.5	77.93
11	18	14	0.15	0.247	9	77.93
12	20	14	0.15	0.247	9.35	77.93
13	25	14	0.15	0.247	10.75	77.93
14	30	14	0.15	0.247		77.93
15	40	14	0.15	0.247		77.93
16	50	14	0.15	0.247		77.93

### Multicore Rounded Cable (14/0.130)-----14/39

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	14	0.13	0.186	4	103.42
2	3	14	0.13	0.186	4.5	103.42
3	4	14	0.13	0.186	4.7	103.42
4	5	14	0.13	0.186	5.2	103.42
5	6	14	0.13	0.186	5.5	103.42
6	8	14	0.13	0.186	6.45	103.42
7	10	14	0.13	0.186	6.8	103.42
8	12	14	0.13	0.186	7.4	103.42
9	15	14	0.13	0.186	8.2	103.42
10	16	14	0.13	0.186	8.5	103.42
11	18	14	0.13	0.186	9	103.42
12	20	14	0.13	0.186	9.35	103.42
13	25	14	0.13	0.186	10.75	103.42
14	30	14	0.13	0.186		103.42
15	40	14	0.13	0.186		103.42
16	50	14	0.13	0.186		103.42

### Multicore Rounded Cable (16/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	16	0.2	0.5	5.7	40.1
2	3	16	0.2	0.5	5.75	40.1
3	4	16	0.2	0.5	6.8	40.1
4	6	16	0.2	0.5	8	40.1
5	8	16	0.2	0.5	8.4	40.1
6	10	16	0.2	0.5	9	40.1
7	12	16	0.2	0.5	10	40.1
8	16	16	0.2	0.5	10.8	40.1
9	20	16	0.2	0.5	13	40.1
10	25	16	0.2	0.5	14	40.1

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## MULTICORE ROUND CABLES



### Multicore Rounded Cable (24/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	3	24	0.2	0.75	6.7	21.7
2	4	24	0.2	0.75	7.2	21.7
3	6	24	0.2	0.75	8.2	21.7
4	8	24	0.2	0.75	9	21.7
5	10	24	0.2	0.75	9.5	21.7
6	12	24	0.2	0.75	10.3	21.7
7	16	24	0.2	0.75	12.5	21.7
8	20	24	0.2	0.75	14	21.7
9	25	24	0.2	0.75	15	21.7

### Multicore Rounded Cable (32/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	32	0.2	1	7.2	20
2	3	32	0.2	1	7.6	20
3	4	32	0.2	1	8.6	20
4	6	32	0.2	1	9.8	20
5	8	32	0.2	1	10.4	20
6	10	32	0.2	1	12.6	20

### Multicore Rounded Cable (48/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	48	0.2	1.507	7.1	13.7
2	3	48	0.2	1.507	7.4	13.7
3	4	48	0.2	1.507	8.4	13.7

### Multicore Rounded Cable (100/40)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	100	0.12	1.13	6.65	18.27
2	3	100	0.12	1.13	7.9	18.27
3	4	100	0.12	1.13	8.4	18.27

### Multicore Rounded Cable (200/40)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	200	0.12	2.21	9.6	9.1
2	3	200	0.12	2.21	10.7	9.1
3	4	200	0.12	2.21	11	9.1

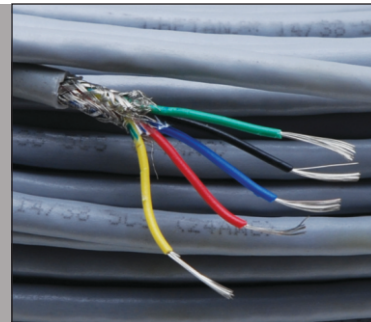
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## SHIELDED CABLES



### Multicore Shielded Cables

Chetan Shielded cable ensures signal integrity and provides confidence in audio and video transmissions, preventing downtime and maintaining sound and picture clarity. Among the shield types available are braid shield, foil shield, combination shields and lapp shields.

**Braid Shield:** Braid shield consists of groups of tinned or bare or silver plated copper or aluminium strands, one set woven in a clockwise direction and interwoven with another set in a counter clockwise direction.

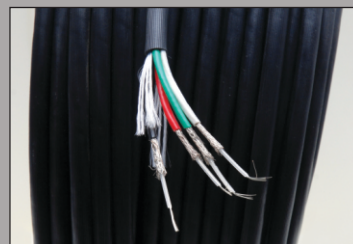
Braid shields provide superior structural integrity, while maintaining good flexibility and flex life. These shields are ideal for minimizing low frequency interference and have lower DC resistance than foil. Braid shields are effective at audio, as well as RF ranges. Generally the higher the braid coverage, the more effective the shield. However, the trade-off between cost and braid coverage must be considered. Typical braid coverage are between 80% and 95%. Coverage of 100% is unattainable with a braid shield.

**Foil Shield:** Foil Shield consists of Aluminium Foil laminated to a polyester or Polypropylene film. The Film gives the shield mechanical strength and bonus insulation. Foil shield provides 100% cable coverage, necessary for electrostatic shield protection. Because of their small size, foil shields are commonly used to shield individual pairs of multipair data cables to reduce crosstalk. Drain wires are used with foil shield to make termination easier and to ground electrostatic discharges. The shortcoming in using the foil shield include higher DC resistance and lower mechanical strength than braid or spiral shield.

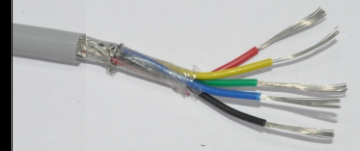
**Lapp Spiral Shield:** A spiral shield consists of wire usually copper wrapped in a spiral around the inner cable core. Superior flexibility and flex life, ease of termination and upto 97% coverage are the advantage of spiral shields. They are best suited for audio applications. As a rule spiral shields are not suitable above the audio frequency range due to coil effect produced by the inductance of the spiral wire strands.

**Combination Shields:** These consist of more than one layer of shielding. They provide maximum shield efficiency across the frequency spectrum. The combination foil/Braid shield combines the advantage of 100% foil coverage plus the strength and low DC resistance of the braid.

Most of our shielded cables are available ex-stock in a wide variety of colours and packages. Many of these are available off the shelf from our distributors. If you have a new or unusual requirement, you can contact us.



## SHIELDED CABLES



**Multicore Shield Cable (7/0.150)-----7/38**

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	7	0.15	0.124	3.3	155.85
2	3	7	0.15	0.124	4.15	155.85
3	4	7	0.15	0.124	4.4	155.85
4	5	7	0.15	0.124	4.8	155.85
5	6	7	0.15	0.124	5.2	155.85
6	8	7	0.15	0.124	5.8	155.85
7	9	7	0.15	0.124	6	155.85
8	10	7	0.15	0.124	6.35	155.85
9	12	7	0.15	0.124	7	155.85
10	15	7	0.15	0.124	7.65	155.85
11	16	7	0.15	0.124	7.8	155.85
12	18	7	0.15	0.124	8.1	155.85
13	20	7	0.15	0.124	8.7	155.85
14	25	7	0.15	0.124	9.4	155.85
15	30	7	0.15	0.124	9.75	155.85
16	35	7	0.15	0.124	10.2	155.85
17	40	7	0.15	0.124	10.8	155.85
18	50	7	0.15	0.124	12.1	155.85

**Multicore Shield Cable (7/0.130)-----7/39**

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	7	0.13	0.093	3.3	206.83
2	3	7	0.13	0.093	4.15	206.83
3	4	7	0.13	0.093	4.4	206.83
4	5	7	0.13	0.093	4.8	206.83
5	6	7	0.13	0.093	5.2	206.83
6	8	7	0.13	0.093	5.8	206.83
7	9	7	0.13	0.093	6	206.83
8	10	7	0.13	0.093	6.35	206.83
9	12	7	0.13	0.093	7	206.83
10	15	7	0.13	0.093	7.65	206.83
11	16	7	0.13	0.093	7.8	206.83
12	18	7	0.13	0.093	8.1	206.83
13	20	7	0.13	0.093	8.7	206.83
14	25	7	0.13	0.093	9.4	206.83
15	30	7	0.13	0.093	9.75	206.83
16	35	7	0.13	0.093	10.2	206.83
17	40	7	0.13	0.093	10.8	206.83
18	50	7	0.13	0.093	12.1	206.83

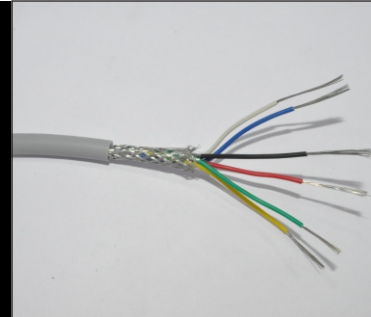
**Multicore Shield Cable (7/0.190)-----7/36**

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	2	7	0.19	0.198	4.2	95.45
2	3	7	0.19	0.198	4.7	95.45
3	4	7	0.19	0.198	5.2	95.45
4	5	7	0.19	0.198	5.5	95.45
5	6	7	0.19	0.198	5.8	95.45
6	8	7	0.19	0.198	6.2	95.45
7	10	7	0.19	0.198	6.8	95.45
8	12	7	0.19	0.198	7.4	95.45
9	16	7	0.19	0.198	8.1	95.45
10	18	7	0.19	0.198	8.7	95.45
11	20	7	0.19	0.198	9.5	95.45

We can also manufacture the product as per your specification and need.  
Due to continuous research and innovation the product specifications shown above are subject to change.



## SHIELDED CABLES



### Multicore Shield Cable (14/0.150)-----14/38

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	14	0.15	0.247	3.5	77.93
2	2	14	0.15	0.247	4.6	77.93
3	3	14	0.15	0.247	5	77.93
4	4	14	0.15	0.247	5.5	77.93
5	5	14	0.15	0.247	5.6	77.93
6	6	14	0.15	0.247	6.2	77.93
7	8	14	0.15	0.247	7	77.93
8	9	14	0.15	0.247	7.65	77.93
9	10	14	0.15	0.247	7.7	77.93
10	12	14	0.15	0.247	8.2	77.93
11	16	14	0.15	0.247	9	77.93
12	18	14	0.15	0.247	9.4	77.93
13	20	14	0.15	0.247	10.35	77.93
14	25	14	0.15	0.247	10.8	77.93

### Multicore Shield Cable (14/0.130)-----14/39

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	14	0.13	0.186	3.5	103.42
2	2	14	0.13	0.186	4.6	103.42
3	3	14	0.13	0.186	5	103.42
4	4	14	0.13	0.186	5.5	103.42
5	5	14	0.13	0.186	5.6	103.42
6	6	14	0.13	0.186	6.2	103.42
7	8	14	0.13	0.186	7	103.42
8	9	14	0.13	0.186	7.65	103.42
9	10	14	0.13	0.186	7.7	103.42
10	12	14	0.13	0.186	8.2	103.42
11	16	14	0.13	0.186	9	103.42
12	18	14	0.13	0.186	9.4	103.42
13	20	14	0.13	0.186	10.35	103.42
14	25	14	0.13	0.186	10.8	103.42

### Multicore Shield Cable (16/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	16	0.2	0.502	4	40.1
2	2	16	0.2	0.502	6.5	40.1
3	3	16	0.2	0.502	6	40.1
4	4	16	0.2	0.502	7	40.1
5	6	16	0.2	0.502	7.9	40.1
6	8	16	0.2	0.502	8.65	40.1
7	10	16	0.2	0.502	9.6	40.1
8	12	16	0.2	0.502	10.5	40.1
9	16	16	0.2	0.502	12	40.1

We can also manufacture the product as per your specification and need.  
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## SHIELDED CABLES



### Multicore Shield Cable (24/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	24	0.2	0.754	4.3	26.7
2	2	24	0.2	0.754	6.5	26.7
3	3	24	0.2	0.754	6.85	26.7
4	4	24	0.2	0.754	8.25	26.7
5	6	24	0.2	0.754	9	26.7
6	8	24	0.2	0.754	9.8	26.7
7	10	24	0.2	0.754	10.6	26.7
8	12	24	0.2	0.754	11.6	26.7
9	16	24	0.2	0.754	13.4	26.7

### Multicore Shield Cable (32/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	32	0.2	1	4.5	20
2	2	32	0.2	1	7	20
3	3	32	0.2	1	7.8	20
4	4	32	0.2	1	8.65	20
5	6	32	0.2	1	9.8	20
6	8	32	0.2	1	11.3	20
7	10	32	0.2	1	12.8	20

### Multicore Shield Cable (48/0.2)

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	48	0.2	1.507	5.4	13.7
2	2	48	0.2	1.507	7.7	13.7
3	3	48	0.2	1.507	8.45	13.7
4	4	48	0.2	1.507	9.25	13.7
5	5	48	0.2	1.507	9.9	13.7

We can also manufacture the product as per your specification and need.  
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**Chetani**  
Cabletronics Pvt. Ltd.



## SHIELDED CABLES



### PICK UP WIRES

S. No.	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	7/42	0.1	0.0549	1.7	354.61
2	2	7/42	0.1	0.0549	1.7	354.61
3	3	7/42	0.1	0.0549	1.7	354.61
4	4	7/42	0.1	0.0549	1.7	354.61
5	1	7/40	0.12	0.079	1.7	250
6	1	7/38	0.15	0.1236	2.2	155.85
7	2	7/38	0.15	0.1236	2.2	155.85
8	1	14/38	0.15	0.2472	3.5	77.93
9	1	14/36	0.19	0.2472	3.6	47.73
10	1	7/36	0.19	0.1983	2.4	95.45
11	2	7/36	0.19	0.1983	2.4	95.45



### LAPPING WIRES

S. No.	Item	No. of Core	No. of Strands	A.T.C. Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Conductor Resistance (ohm/km) at 20°C
1	1	7/42.	7	0.1	0.055	1.6	350
2	1	7/42. TP	7	0.1	0.055	1.6	350
3	2	7/42.	7	0.1	0.055	2.45	350
4	3	7/42.	7	0.1	0.055		350
5	4	7/42.	7	0.1	0.055	3.5	350
6	1	7/40. Moter	7	0.12	0.07		250
7	1	14/44	14	0.08	0.07	2	279.75
8	2	14/44	14	0.08	0.07	2.6	279.75
9	3	1/44	14	0.08	0.07	2.6	279.75
10	1	40/44	40	0.08	0.201	2.8	97.91
11	2	40/44	40	0.08	0.201	4.4	97.91
12	1	80/44	80	0.08	0.402	3.5	48.96
13	2	80/44	80	0.08	0.402	5.65	48.96



### EARTHING WIRES

S. No.	Product Code	No. of Strands	Cond. Size in mm	Overall dia. in mm	Area (mm <sup>2</sup> )	Ohms per meter	Cr,At at 20°C (ohm/km)
1	2243 SPC	24x0.09mm	0.09	0.5	0.09	0.1526	131.3
2	2342 SPC	36x0.09mm	0.09	0.65	0.08	0.2289	87.5
3	6342 SPC	48x0.09mm	0.09	0.75	0.05	0.2152	65.7
4	25243 SPC	52x0.09mm	0.09	0.8	0.05	0.3216	60.6
5	27843 SPC	78x0.09mm	0.09	4.00/0.35	0.04	0.4959	40.4
6	2644 SPC	60x0.09mm	0.09	0.8	0.05	0.3815	52.5
7	6742 SPC	112x0.09mm	0.09	1.1	0.03	0.7121	28.2
8	4944 SPC	216x0.08mm	0.08	6	0.02	1.0851	13.6
9	41141 SPC	264x0.11mm	0.11	7	0.01	2.5076	9.7
10	425 ABC	65x0.1mm	0.1	3/0.33	0.06	0.51025	41.4
11	427 ABC	91x0.1mm	0.1	4.3/0.35	0.05	0.7143	29.6



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## SHIELDED CABLES



### PROJECTOR CABLES

We at Chetan manufacture S-Video, RGB and RGBHV cables.

#### Applications

These cables are ideal for high resolution monitor and projection imaging in the following situations and facilities-Corporate Boardrooms, command and control centres, multipurpose auditoriums, teleconferencing centres, home theaters, post production facilities.

#### Configuration

Conductor - 26 AWG

Dielectric - Polyethylene

Velocity of propagation - 66%

Nominal Impedance - 64 ohm to 70 ohm

We at Chetan also make OB Van cables with application in outdoor live media coverage.

### SNAKE CABLE

Snake cables are used to connect multiple audio channels in low-level (microphone) and high-level (line) componentry such as console board equipment for recording studios, radio, television stations, post-production facilities, and sound system installations. With Chetan's individually shielded and jacketed snakes, pairs can be split out of the overall jacket for any length and connectorized directly without the need for heat shrink tubing or costly and time-consuming preparation. Jacketed pairs are individually color coded for easy identification.

Snake cables are available in 4,6,8,16 and 24 pair configurations.

#### Product Description

Stranded (24x. 10mm) bare copper conductor. Polyethylene insulation. Pairs individually lapped with bare copper and alum. Foil, .45mm tinned copper drain wire.

Coloured PVC inner jackets with overall Matte Black PVC jacket and 0.61 mm tinned copper drain wire.

#### Specifications

Nominal OD – Conductor 0.61 mm

Nominal OD – Insulation 1.2 mm

Inner Pair Jacket OD – 3.5 mm

Temperature Rating 75° C

Nominal Impedance 40 ohm

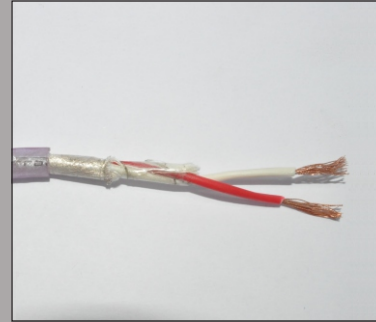
Nominal Velocity of Propagation 66%

Nominal Capacitance

Between Conductors and Shield 39 pF/Ft. (129 pF/m)



## SHIELDED CABLES



### MICROPHONE CABLES

Chetan Microphone cable is used for connecting flow level microphones or musical instruments. Key properties of microphone cable (Mike) are ruggedness, flexibility, flex life and interference immunity.

Mike cable construction utilizes either 1/2/3 or 4 conductor configuration. Cable selection depends on whether the mike or instrument is of a high or low impedance design. High impedance requires unbalanced single conductor cable while low impedance utilizes 2/3 or 4 designs.

4 conductor mike cable-Quad mike cables are connected by attaching 2 white conductors to 1 pin and 2 Red Conductors to the other pin in a balanced line XLR type connector. Conductors joint in this manner lower the possibility of induced noise.

Digital audio has been around for over 25 years, only recently has ben there an effort to standardize specifications. The audio engineering society (U.S) and the European broadcast union have established an international standard called AES / EBU. The detailed specifications of this standard are

- Sampling Rate: from 32 KHz to 192 KHz
- Bandwidth: from 4.096 MHz to 24.5 MHz
- Impedance: 110 ohm  $\pm$  20 %

The key difference between twisted pair specification for digital audio cable and standard analog audio cable is the impedance specification.

Standard analog audio cable impedance is 45 ohm to 70 ohm. This potential amount of mismatch can result in signal reflection and jitter causing bit errors at the receiver. For this reason Chetan recommends 100 to 120 ohm shielded twisted pair cables.

Most of our Mike Cables are available ex-stock in a wide variety of colours and packages. Many of these are available off the shelf from our distributors. If you have a new or unusual requirement, you can contact us.



S. No.	No. of Core	Item	No. of Strands	Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Cr.At at 20°C (ohm/km)
1	2	19/40 ABC	19	0.12	0.215	6.1	87.41
2	2	19/40 ATC	19	0.12	0.215	6.1	90.03
3	4	19/40 ABC	19	0.12	0.215	7.1	87.41
4	2	19/40 ABC-TP	19	0.12	0.215	5.9	87.41
5	2	19/40 ATC-TP	19	0.12	0.215	5.9	90.03
6	1	19/40	19	0.12	0.215	5	9.03
7	2	14/36 ATC	14	0.19	0.397	6.1	47.73
8	2	14/.2 ATC	14	0.2	0.44	6.2	44.15
9	2	16/0.2 ATC	16	0.2	0.502	6.8	40.1
10	2	24/0.2 ATC	24	0.2	0.754	7.4	26.7
11	1	14/36 ATC	14	0.19	0.397	5.5	47.73
12	1	40/40 ABC	40	0.12	0.452	5.5	42.76
13	2	19/42 ABC	19	0.1	0.149	5.9	123.97
14	2	23/36 ABC	23	0.19	0.652	6.35	29.05

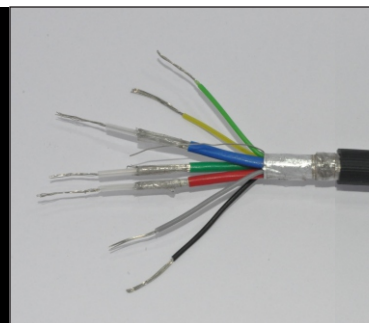
### Mic Cable (SUMO)

S. No.	No. of Core	Item	No. of Strands	Cond. Size in mm	Cross sect. area in (mm <sup>2</sup> )	O.D (mm)	Cr.At at 20°C (ohm/km)
1	2	19/42 CCA	19	0.1	0.149	6.1	356.15
2	2	19/40 (N) CCA	19	0.12	0.215	6.1	243.05
3	1	40/40 (CU/CCA)	19	0.12	0.215	5.5	42.76
4	1	40/40 (CCA/CCA)	19	0.12	0.215	5.5	116.58
5	2	19/40 (CCA/CCA)	19	0.12	0.215	6.1	243.05

We can also manufacture the product as per your specification and need.  
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## SHIELDED CABLES



### CCTV CABLES

The Closed Circuit TV / Video Surveillance business is the fastest growing part of our portfolio of products. Through the convergence of Security and I.P. camera systems and card access are now under direction of the corporate IT Department.

There is a tremendous demand currently in the video recording world. Digital Video Recording has taken place of old analog tape systems. End users now can designate space on their network and store footage digitally. This technology upgrade is comparable to how compact disks have led to the demise of cassette players. Remote access is now a standard offering, which requires the assignment of an IP address to your network.

In short, Digital Video Recording:

1. Eliminates the time and effort designated for changing tapes.
2. Allows for quick playback with enhanced viewing clarity.
3. Enables easy remote access from multiple designated PC's.
4. Offers simplified storage on your network.

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/40 (2+1)	0.12	0.1582	5.4	122.6
2	14/40 (3+1)	0.12	0.1582	5.7	122.6
3	14/40 (4+1)	0.12	0.1582	5.9	122.6
4	14/40 (6+1)	0.12	0.1582	6.8	122.6
5	14/38 (3+1)	0.15	0.2472	5.9	79
6	14/38 (4+1)	0.15	0.2472	6.1	79

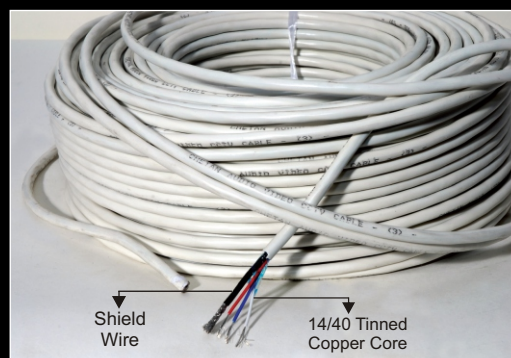
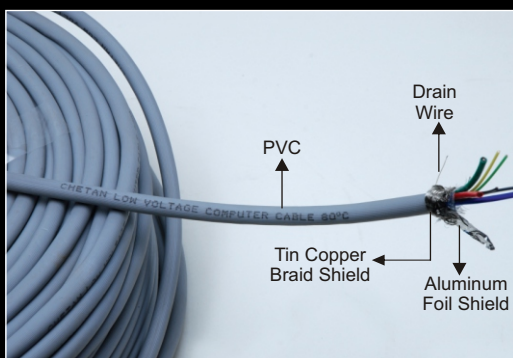
### Video Graphics Array (VGA)

The VGA color system is backwards compatible with the EGA and CGA adapters, and adds another level of configuration on top of that. VGA adapters usually support both a monochrome and a color text mode, though the monochrome mode is rarely used. We can use it as an extension cable for connecting PC/Laptops to Computer Monitors and Projectors.

#### VGA MONITOR CABLES

S. No.	Item	Overall dia. in mm	Core insulation (7/36)	Lapping core (7/38)	Drain (SWG=27 No.)
1	3+4	8.4	Core OD -1.20 mm	Core OD - 2.40 mm	Cond. Size - 0.417 mm
2	3+6	8.75	Cond. Size - 0.193 mm	Cond. Size - 0.152 mm	Singal Stand Wire Drain
3	3+7	8.9	CR at 20°C- 97.8 Ω/Km	CR at 20°C - 157.9 Ω/Km	CR at 20°C -141.38 Ω/Km
4	3+8	9.1			

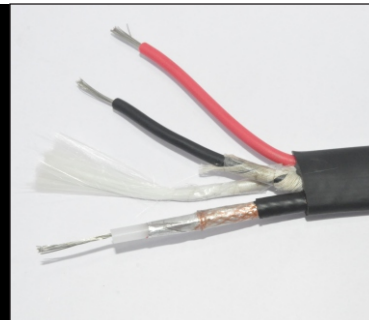
### CCTV CABLE - SHIELD



We can also manufacture the product as per your specification and need. Due to continuous research and innovation the product specifications shown above are subject to change.



## SHIELDED CABLES



### SUMO Braid CCA CCTV CABLE

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/40 (2+1)	0.12	0.1582	5.4	122.6
2	14/40 (3+1)	0.12	0.1582	5.7	122.6
3	14/40 (4+1)	0.12	0.1582	5.9	122.6
4	14/40 (6+1)	0.12	0.1582	6.8	122.6

### CCTV CABLE (G)

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/42 (2+1)	0.1	0.114	5.4	184.62
2	14/42 (3+1)	0.1	0.114	5.7	184.62
3	14/42 (4+1)	0.1	0.114	5.9	184.62

### SUMO Braid CCA CCTV CABLE (G)

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/42 (2+1)	0.1	0.114	5.4	184.62
2	14/42 (3+1)	0.1	0.114	5.7	184.62
3	14/42 (4+1)	0.1	0.114	5.9	184.62

### CCTV CABLE(G)

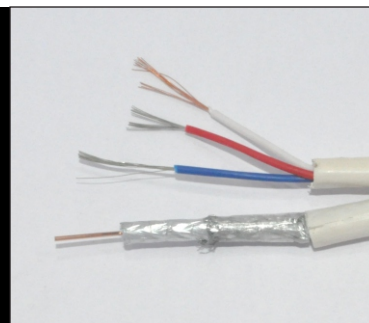
S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/40 (2+1)	0.12	0.1582	5.4	122.6
2	14/40 (3+1)	0.12	0.1582	5.7	122.6
3	14/40 (4+1)	0.12	0.1582	5.9	122.6
4	14/40 (6+1)	0.12	0.1582	6.8	122.6
5	14/38 (3+1)	0.15	0.2472	5.9	79
6	14/38 (4+1)	0.15	0.2472	6.1	79

### INFINITY CABLE

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/36 (2+1)	0.19	0.3967	5.3	49
2	14/40 (3+1)	0.12	0.1582	5.5	122.6
3	14/40 (4+1)	0.12	0.1582	5.6	122.6

We can also manufacture the product as per your specification and need.  
Due to continuous research and innovation the product specifications shown above are subject to change.

## SHIELDED CABLES



### NEO CCTV CABLE

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/40 (3+1)	0.12	0.1582	8	122.6
2	14/40 (4+1)	0.12	0.1582	8.5	122.6
3	14/40 (6+1)	0.12	0.1582	9.2	122.6

### NEO PLUS CCTV CABLE( Braid CCA)

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/40 (3+1)	0.12	0.1582	6.5	122.6
2	14/40 (4+1)	0.12	0.1582	6.8	122.6

### All CCA CCTV CABLE (G)

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	14/40 (2+1)	0.12	0.1582	5.4	350
2	14/40 (3+1)	0.12	0.1582	5.7	350
3	14/40 (4+1)	0.12	0.1582	5.9	350
4	14/40 (6+1)	0.12	0.1582	6.8	350

### CAMERA LIFT CABLE

S. No.	Item Name	A.T.C. Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Max. Conductor Resistance (ohm/km) at 20°C
1	LIFT CABLE	24/0.2, RG-59 U	0.75 , 0.40	6.50x16.70	26.7



We can also manufacture the product as per your specification and need.  
Due to continuous research and innovation the product specifications shown above are subject to change.

## SPEAKER CABLES



Speaker cable are used to link speakers with receivers or power amplifiers. They are also used for the internal wiring of t6he speaker per se. High conductivity copper which is 99.95 % pure and which make audio cable performance comparable to that of oxygen free copper cable what we use to manufacture our CAT 5 cables.



### Speaker Cable Selection Guide

AWG	Area (sq.mm)	4 ohm Speaker			8 ohm Speaker			70V Speaker		
		Power(%) Loss (dB/Ft.)								
		11 % (0.5)	21 % (1)	50 % (3)	11 % (0.5)	21 % (1)	50 % (3)	11 % (0.5)	21 % (1)	50 % (3)
12	3.3	140	305	1150	285	610	2285	6920	14890	56000
14	2.09	90	195	740	185	395	1480	4490	9650	36300
16	1.33	60	125	470	115	250	935	2840	6100	222950
18	0.82	40	90	340	85	190	685	2070	4450	16720
20	0.51	25	50	195	50	105	390	1170	2520	9500
22	0.32	15	35	135	35	70	275	820	1770	6650
24	0.2	10	25	85	20	45	170	520	1120	4210
26	0.1	35	15	50	10	25	130	450	860	3210

The number of feet of cable you can run for a given loss and performance budget

### How to use the above guide?

1. select the appropriate speaker impedance column
2. select the appropriate power loss column deemed to be acceptable.
3. select the applicable wire gauge size and follow the row over to the columns determined in steps 1 & 2.

The number listed is the maximum cable run length

Example: The maximum run for 12 AWG in a 4 ohm speaker system with 11% power or.5dB loss is 140 ft.

We can also manufacture the product as per your specification and need.  
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## SPEAKER CABLES



### DOUBLE FLEXIBLE WIRES

S. No.	No. of strands SWG	No. of Strands	Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Cr.At at 20°C (ohm/km)
1	1/26.	1	0.45	0.159	1.15	116.85
2	1/25.	1	0.51	0.204	1.2	90.49
3	14/39 ATC	14	0.13	0.186	1.7	103.42
4	14/39 ABC	14	0.13	0.186	1.8	100.41
5	14/42	14	0.1	0.11	1.7	168.25
6	14/40	14	0.12	0.158	3.5	121
7	23/39	23	0.13	0.305	2.2	62.95
8	23/38	23	0.15	0.406	2.5	47.43
9	23/36	23	0.19	0.652	2.5	29.05
10	40/40	40	0.12	0.452	3.5	42.76
11	40/38	40	0.15	0.707	3	27.28
12	14/36	14	0.19	0.397	1.9	46.75
13	23/36	23	0.19	0.652	2.5	28.5
14	40/36	40	0.19	1.134	3	16.7

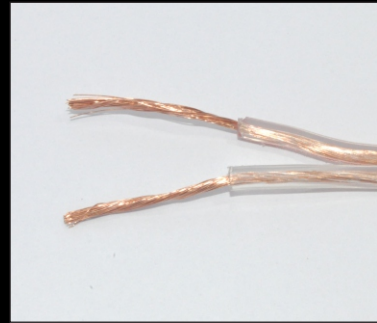
### TWIN PARALLEL WIRE

S. No.	No. of strands SWG	No. of Strands	Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Cr.At at 20°C (ohm/km)
1	55/43 (N)	55	0.09	0.35	3.2	56.59
2	55/43	55	0.09	0.35	3.2	56.59
3	14/42 (B.S.P)	14	0.1	0.11	1.7	184.62
4	14/42 (B.S.P)	14	0.1	0.11	2.1	184.62
5	16/42 BC	16	0.1	0.13	2.25	159.8
6	23/40 BC	23	0.12	0.26	2.5	74.37
7	14/40	14	0.12	0.16	2	122.18
8	14/39	14	0.13	0.19	2.3	103.42
9	7/38.	7	0.15	0.12	2	155.8
10	7/38.	7	0.15	0.12	2	155.85
11	14/38	14	0.15	0.25	2.4	77.93
12	14/38	14	0.15	0.25	1	77.93
13	14/38B.S.P	14	0.15	0.25	1.8	77.93
14	14/36	14	0.19	0.4	2.3	47.73
15	23/36	23	0.19	0.65	2.7	29.05
16	40/36	40	0.19	1.13	3.2	16.71
17	80/0.2	80	0.2	2.51	4	8.21

We can also manufacture the product as per your specification and need.  
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## SPEAKER CABLES



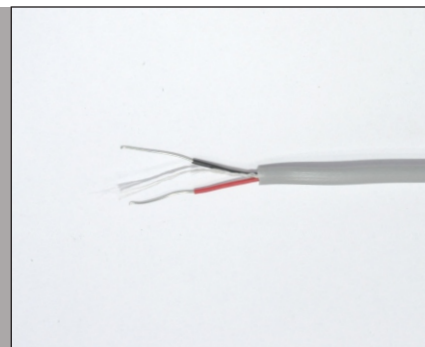
### TWIN PARALLEL WIRE T.P.

S. No.	Item	Con. Type	No. of Strands	Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Cr,At at 20°C (ohm/km)
1	170/43	SPC X SPC	170	0.09	1.08	3.65	18.31
2	90/42	ABC X ABC	90	0.1	0.71	2.55	28.22
3	200/42	ABC X ABC	200	0.1	1.57	3.5	12.7
4	350/42	ABC X ABC	350	0.1	2.75	4.6	7.75
5	450/42	ABC X ABC	450	0.1	3.53	5.5	6.8
6	14/40	TP	14	0.12	0.16	2	122
7	70/40	ABC X ABC	70	0.12	0.79	2.85	24.44
8	105/40	ABC X ABC	105	0.12	1.19	3.25	16.29
9	168/40	ABC X ABC	18	0.12	1.9	3.5	10.18
10	224/40	ABC X ABC	224	0.12	2.53	4	7.64
11	14/38	ATC x ATC	14	0.15	0.25	2.4	78
12	17/38	ATC x ATC	17	0.15	0.3	1.6	64.56
13	19/38	ATC x ATC	19	0.15	0.34	1.6	57.8
14	19/38	ABC X ATC	19	0.15	0.34	1.6	57.8
15	19/38	ABC X ABC	19	0.15	0.34	2.4	57.8
16	40/38	ABC X ATC	40	0.15	0.71	3.2	27.42
17	70/38	ABC X ATC	70	0.15	1.24	3.4	15.85
18	14/36	ABC X ATC	14	0.19	0.4	2.3	47.73
19	23/36	ABC X ATC	23	0.19	0.65	2.5	29.05
20	40/36	ABC X ATC	40	0.19	1.13	3.2	16.71
21	40/36	ATC x ATC					
		Red Line	40	0.19	1.13	3.9	16.95
22	70/36	ABC X ATC	70	0.19	1.98	3.55	9.72

### TWIN PARALLEL WIRE T.P. (CCA)

S. No.	Item	Con. Type	No. of Strands	Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Cr,At at 20°C (ohm/km)
1	105/40	ABC X ABC	105	0.12	1.19	3.55	45.46
2	168/40	ABC X ABC	168	0.12	1.9	3.85	28.03
3	224/40	ABC X ABC	224	0.12	2.53	4	21.23
4	14/36	ABC X ABC	14	0.19	0.4	2.5	128.71
5	23/36	ABC X ABC	23	0.19	0.65	2.85	78.34
6	40/36	ABC X ABC	40	0.19	1.13	3.5	45.05

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Chetan pair cable products are manufactured in variety of gauge sizes, dimensions, insulation materials, shielding configurations and jacketing materials. Paired cable allow balance signal transmissions which results in lower crosstalk through common mode rejection. Due to the improved noise immunity of twisted pairs, they generally permit high data speed than multi conductor cables. Most of our pair cables are available ex-stock in a wide variety of colours and packages. Many of these are available off the shelf from our distributors. If you have a new or unusual requirement, you can contact us.

## 100 ohm/120 ohm Balanced PCM Cables for Transmission Equipment

### Installation

**Conductor:** Solid plain annealed copper

**Insulation:** PE

**Pair Colour:** A Wire-Red, B Wire-Blue

**Lay-up:** Two insulated conductors twisted to form a pair, Screened with numbered Aluminium mylar tape with 0.5mm ATC earth wire. Required number of pairs are laid up, stranded together to form a compact circular cable.

**Wrapping:** Polyester or polyethylene tapes are taped around the cable for isolation.

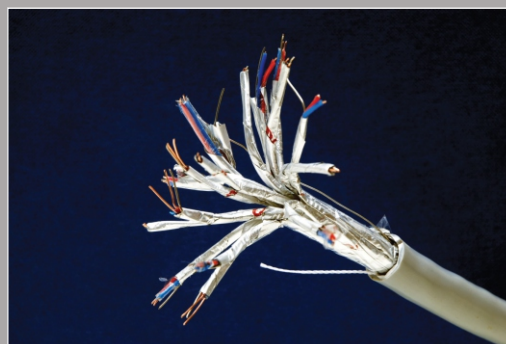
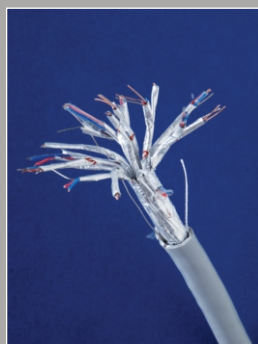
**Screening:** Aluminium mylar tape lapped with overlap. Nominal thickness of tape is 0.05mm with earth wire 0.5mm ATC.

**Braiding (Optional):** 0.15mm ATC braiding with minimum coverage of 30% and 35-40° braid angle.

**Sheath:** PVC/FR/PU

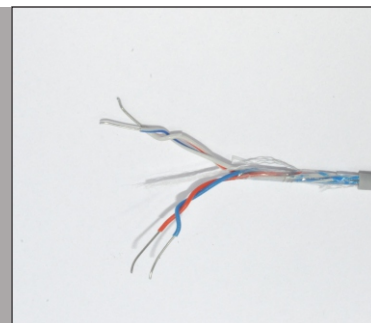
**Velocity of Propagation :** 66%

Conductor Diameter (mm)	Conductor Resistance(Loop) at 20°C (ohm/km)	Insulation Resistance (Mohm/km)	Capacitance Un-balance Pair to Ground (pF)for 500m	Impedance (ohm)	Resistance Un-balance %	Cross talk db for 500m.Length
1.4	308	5000	2000	120	2.5	70
0.5	187.9	5000	2000	120	2.5	70



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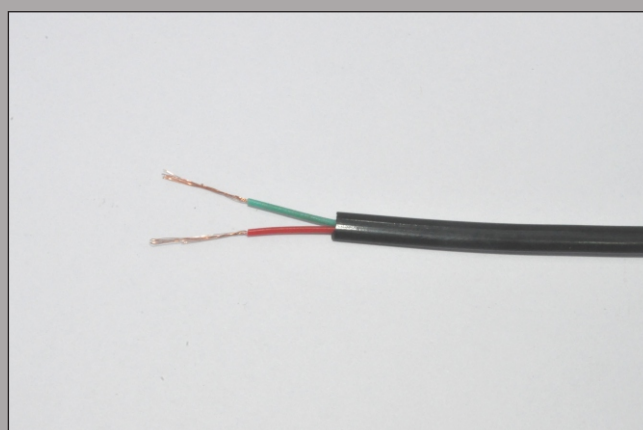
## TELECOMMUNICATION CABLES



No. of Pairs	No. of Cores	Numbered Tape	Sheath Thickness (mm) Nominal
1	2	1	0.8
2	4	2	0.8
3	6	3	0.8
4	8	4	0.8
5	10	5	0.8
6	12	6	1
7	14	7	1
8	16	8	1
9	18	9	1
10	20	10	1
11	22	11	1.4
12	24	12	1.4
13	26	13	1.4
14	28	14	1.4
15	30	15	1.4
16	32	16	1.4

### STRAIGHT CORE

S. No.	Item	Con. Type	No. of Strands	Cond. Size in mm	Area in (mm <sup>2</sup> )	O.D in mm	Cr,At at 20°C (ohm/km)
1	One Line	2	7/42.	0.1	0.055	2.35	336.5
2	Two Line	4	7/42.	0.1	0.055	2.3	336.5
3	Three Line	6	7/42.	0.1	0.055	2.45	336.5
4	Four Line	8	7/42.	0.1	0.055	2.5	336.5



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**Chetani**  
Cabletronics Pvt. Ltd.

## COAXIAL CABLES



A coaxial consists of two conductors separated by a dielectric material. The centre conductor and the outer conductor or shield are configured in such a way that they form concentric cylinders with a common axis. Hence the term and name Co-axial cable.

The centre conductor may be made of various materials and constructions. Most common construction are solid or 7 strand conductor. Solid conductors are used in permanent, infrequently handled or low flex applications and stranded copper are used in flexible cable applications. Some common materials include copper, tinned or silver plated copper, copper clad steel and copper clad aluminium. Plated copper is used to aid in solder ability of connectors or to minimize the corrosion effect. Because of a phenomena known as skin effect, copper clad materials may be used in higher frequency applications to improve tensile strength and reduce weight and cost. (Skin effect is the result of higher frequency signals, propagating along the outermost surface, or skin, of the conductor

S.No.	ITEM	PVC	Cond.	Core OD	Braiding	Velocity	OD	Ohms	Capacitance
<b>50 Ohms</b>									
1	RG-174	PE	7/0.15	1.5	96%	66%	2.8	50	32.8pF per Ft
2	RG-58	PE	20/0.15	2.85	80%	66%	4.9	50	30 pF per Ft
3	RG-58	PE	19/0.19	2.85	96%	66%	4.9	50	30pF per Ft
4	RG-213	PE	7/0.8	7.1	96% ABC	66%	10.2	50	28 pF per Ft
5	RG-223	PE	1/1.04	2.95	96% alloy	66%	5	50	28 pF per Ft
6	RG-8	PE	19/0.29	3.95	5% ABC	66%	6.15	50	26 pF per Ft
<b>75 Ohms</b>									
1	RG-59	PE	1/0.81	3.75	95 ABC%	66%	6.2	75	18.4 pF per Ft
2	RG-59	PE	1/0.71	3.77	5 ABC%	66%	6.2	75	18.4 pF per Ft
3	RG-59	Foam	1/0.81	3.75	Alum. Alloy Braid+ Foil	83%	6.2	75	16.2 pF per Ft
4	RG-6	Foam	1/1.04	4.57	Alum. Alloy Braid+ Foil	83%	6.9	75	16.2 pF per Ft
5	RG-11	Foam	1/1.61	7.1	Alum. Alloy Braid+ Foil	83%	10.25	75	16.2 pF per Ft



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## GLOSSARY

### The Conductor

When comparing metals, each can be characterised by resistance as the next table shows. Silver, while the best conductor, is expensive and difficult to work with. Copper is the most common metal.

Metals	Resistance
	Circular mil-ohms per foot at 20° C
Silver	9.9
Copper	10.4
Gold	14.7
Aluminum	17.0
Nickel	47.0
Steel	74.0

One advantage of Copper is its ability to be “annealed”. After being drawn through dies from large rod to small wire, copper will get brittle. By placing it in an oven at around 700° F, the copper will become flexible again. Gold is most commonly used on connectors because it will not oxidize. Aluminum is often used in low-cost cable constructions such as CATV/broadband shields, or in low-cost consumer audio interconnect cables.

### Insulation

Basic insulation prevents wires from touching each other and creating a short circuit or grounding portions of a circuit that should not be grounded.

When the insulation affects the signal being carried on the wire, it is called a “dielectric”. Every non-conductor varies in its ability to insulate. Plastics, and other materials, can be compared by a number that describes their quality, called a “dielectric constant”. Below is a list of materials and their dielectric constant. Note that vacuum is the standard by which all other materials are compared, and therefore, has a dielectric constant of one.

Vacuum	= 1
Air	= 1.0167
Teflon™	= 2.1
Polyethylene	= 2.25
Polypropylene	= 2.3
PVC	= 3 to 5

Air is so close to “1” that it is most often used as “1”, in formulas. As we will see, the dielectric constant of air makes it a highly prized commodity in dealing with cable construction.

**TABLE**

**Solid Wire - Annealed and Hard-Drawn Copper**

GAUGE NUMBER		NOMINAL DIAMETER		CALCULATED AREA		NOMINAL WEIGHT
SWG	AWG	INCH	MM	INCH <sup>2</sup>	MM <sup>2</sup>	Kg/Km
50	50	0.0010	0.025	0.000007854	0.0005067	0.004505
-	49	0.0011	0.028	0.000009950	0.0006131	0.005452
49	48	0.0012	0.030	0.000011310	0.0007279	0.006487
-	47	0.0014	0.036	0.000015394	0.0009931	0.008829
48	46	0.0016	0.041	0.00002011	0.001297	0.01153
-	45	0.0018	0.046	0.00002545	0.001642	0.01459
47	44	0.0020	0.051	0.00003142	0.002027	0.0180
-	43	0.0022	0.056	0.00003801	0.002452	0.02180
46	-	0.0024	0.061	0.00004524	0.002919	0.02595
-	42	0.0025	0.064	0.00004909	0.003167	0.02816
45	41	0.0028	0.071	0.00006158	0.003973	0.03531
-	40	0.0031	0.079	0.00007550	0.004869	0.04329
44	-	0.0032	0.081	0.00008042	0.005189	0.04613
-	39	0.0035	0.090	0.0000962	0.006207	0.05518
43	-	0.0036	0.091	0.00010179	0.006567	0.05838
42	38	0.0040	0.102	0.000126	0.008107	0.07207
41	-	0.0044	0.112	0.00015205	0.009810	0.08721
-	37	0.0045	0.114	0.000159	0.01026	0.09122
40	-	0.0048	0.122	0.00018096	0.01168	0.10379
-	36	0.0050	0.127	0.000196	0.01267	0.11262
39	-	0.0052	0.132	0.0002124	0.01370	0.12180
-	35	0.0056	0.142	0.0002460	0.01589	0.14126
38	-	0.0060	0.152	0.0002827	0.01824	0.16217
-	34	0.0063	0.160	0.0003120	0.02011	0.17874
37	-	0.0068	0.173	0.0003632	0.02343	0.2083
-	33	0.0071	0.180	0.0003960	0.02554	0.2271
36	-	0.0076	0.193	0.0004536	0.02927	0.2602
-	32	0.0080	0.203	0.0005030	0.32430	0.2883
35	-	0.0084	0.213	0.0005542	0.03575	0.3178
-	31	0.0089	0.226	0.0006220	0.04014	0.3568
34	-	0.0092	0.234	0.0006648	0.04289	0.3813
33	30	0.0100	0.254	0.0007854	0.05067	0.4505
32	-	0.0108	0.274	0.0009161	0.05910	0.5252
-	29	0.0113	0.287	0.00100	0.06452	0.5752
31	-	0.0116	0.295	0.0010568	0.06818	0.6063
30	-	0.0124	0.315	0.0012076	0.07791	0.6928
-	28	0.0126	0.320	0.00125	0.08064	0.7153
29	-	0.0136	0.345	0.0014527	0.09372	0.8334
-	27	0.0142	0.361	0.00158	0.10217	0.9081
28	-	0.0148	0.376	0.0017203	0.11099	0.9865
-	26	0.0159	0.404	0.00199	0.12810	1.1388
27	-	0.0164	0.417	0.002112	0.13628	1.2116
-	25	0.0179	0.455	0.00252	0.16258	1.4434
26	-	0.0180	0.457	0.002545	0.16417	1.4595
25	-	0.0200	0.508	0.003142	0.20270	1.8018
-	24	0.0201	0.511	0.00317	0.20470	1.8199
24	-	0.0220	0.559	0.003801	0.24520	2.1800
-	23	0.0226	0.574	0.00401	0.25880	2.3010
23	-	0.0240	0.610	0.004524	0.29190	2.5950
-	22	0.0253	0.643	0.00503	0.32430	2.8830
22	-	0.0280	0.711	0.006158	0.39730	3.5310
-	21	0.0285	0.724	0.00638	0.41160	3.6590
21	20	0.0320	0.813	0.00804	0.51890	4.6130
-	19	0.0359	0.912	0.0101	0.65160	5.87
20	-	0.0360	0.914	0.010179	0.65670	5.836
19	-	0.0400	1.020	0.012566	0.81070	7.207
-	18	0.0403	1.020	0.0128	0.82580	7.315
-	17	0.0453	1.150	0.0161	1.03900	9.243
18	-	0.0480	1.220	0.018096	1.16800	10.379
-	16	0.0508	1.290	0.0203	1.30800	11.625
17	-	0.0560	1.420	0.02463	1.58900	14.126
-	15	0.0571	1.450	0.0256	1.65100	14.680

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## COMPOUNDS OF OUR CABLES

### **Polyethylene (Solid and Foamed)**

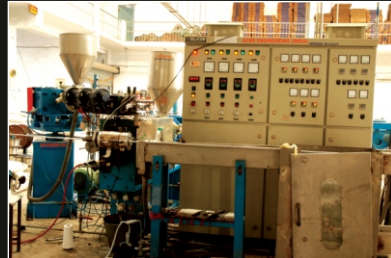
A very good insulation material in terms of electrical properties. Low dielectric constant, a stable dielectric constant over all frequencies, very high insulation resistance. In terms of flexibility, polyethylene can be rated stiff to very hard, depending on molecular weight and density – low density being the most flexible, with high-density, high-molecular weight formulation being very hard. Moisture resistance is rated excellent. Correct Brown and Black formulations have excellent weather resistance. The dielectric constant is 2.3 for solid insulation and typically 1.64 for foam designs. Flame retardant formulations are available with dielectric constants ranging from about 1.7 for foam flame retardant to 2.58 for solid flame retardant polyethylene.

### **Polypropylene (Solid and Foam)**

Similar in electrical properties to polyethylene. This material is primarily used as an insulation material. Typically, it is harder than polyethylene. This makes it suitable for thin wall insulations. UL maximum temperature rating may be 60° C or 80° C. Most UL style call for 60° C maximum. The dielectric constant is 2.25 for solid and typically 1.55 for foam designs.

### **PVC**

Sometimes referred to as vinyl or polyvinylchloride. Extremely high or low temperature properties cannot be found in one formulation. Certain formulations may have -55° C to 105° C rating. Other common vinyls may have 20° C to 60° C. There are many formulations for the variety of different applications. The many varieties of PVC also differ in pliability and electrical properties. The price range can vary accordingly. Typical dielectric constant values can vary from 3.5 to 6.5.



### **Teflon**

This material has excellent electrical properties, temperature range and chemical resistance. It is not suitable where subjected to nuclear radiation and does not have good high voltage characteristics. FEP Teflon is extrudable in a manner similar to PVC and polyethylene. This means that long wire and cable lengths are available. TFE Teflon is extrudable in a hydraulic ram type process. Lengths are limited due to amount of material in the ram, thickness of the insulations, and perform size. TFE must be extruded over silver – or nickel- coated wire. The nickel – and silver-coated designs are rated 260°C and 200° C maximum, respectively . The cost of Teflon is approximately 8 to 10 times more per pound than PVC compounds.

**SWG** - Standard Wire Gage

**ATC** - Annealed Tinned Copper

**SPC** - Silver Plated Copper

**ABC** - Annealed Bare Copper

**ATC** - Annealed Tinned Copper



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