

Cable Armouring

Cable Armouring Wires & Strips

A Cable Armouring Wires is a metal cover usually applied in form of wire or formed wire, intended to protect the cable from mechanical damage.

We manufacture Cable Armouring Wires including Round / Formed wires for cable industries, as per Indian / International specifications e.g. IS-3975 / 1999 and BS – 1442.

Hot Dipped Galvanized Strips Round and Formed Wires (with round and flat cross section) are manufactured in modern galvanized furnace with latest technology to ensure superior quality. The formed and round wires have superior corrosion resistance, tensile strength and flexibility.

Cable Armouring Formed Wires.

Specifications:

Size mm			4.00 X 0.80	6.1 X 1.40
Cross Section	Width	A	4.00	6.10
		B	3.40	5.30
	Thicknes	C	0.80	1.40
	Radius	R	10.00	27.5
Tolerance mm (+/-)			10%	10%
ZINC Coating Gm/Sq. Mt.			110	180
Tensile Strength Mpa			300-500	300-500
Elongation % (min.)			10	10
Resisitivity Ohm-Cm X 10 -6max			14.5	14.5

High & Low Carbon Carbon

HIGH CARBON STEEL WIRES (HCS)

Bansal Wire industries Ltd. (BWIL) manufacture High Carbon Steel Wires in various cross sections in sizes ranging from 0.30mm to 6.00mm in carbon 36 to 85. HCS wires are known for their hardness high tensile strength

Cross Section: Round, Square, Rectangular, Trapezoidal cross sections are manufactured.

Size

- . Round wire : 0.3mm to 6.00mm**
- . Shaped Wire : 0.8x 0.8mm to 10.0x6.0 mm**

Carbon : 36 to 85.

BWIL offer wires in various finishes i.e. annealed, patented, hard, coated (Phosphate & Oiled condition), and clean surface.

Application: The High Carbon Steel Wires, by BWIL, are used to manufacture automotive products, Balls & Taper Roller Bearings, Braiding Hoses, Brushes, Chains, Conveyor Belts, Filters, Free Cutting Wires, Fasteners, Screws, Bolts, Needles, Spokes, Springs, Tying Wire, Wire Ropes, Shots, Wire Mesh etc. Annealed wires are used for redrawing also.

All properties like hardness, tensile strength, size tolerance, coil weight etc. are maintained as per customers' specification.

FEW APPLICATIONS FOR HIGH CARBON STEEL WIRES

Following are some of the special utility and industrial products, made out of our wires. Besides these, lot of other general engineering products are also made from the HCS Wires.

SPRING WIRES

Spring Steel wires are cold drawn wires made from unalloyed high carbon steel. These wires find application in automobile, cycle and other industrial equipment's.

These wires are generally supplied in phosphate and oiled condition.

Specifications:

Standard: IS:4454-1983

Diameter: 0.30mm to 6.0mm**.

Applications: Cold formed Helical Springs, Spring Rings and Wire Forms.

Packing: The wire coils are applied in weight of 10-250kgs., depending on size of wire. Wires are normally oiled and polythene and Hessian.

Rope Wires

BWILS' wires for Ropes are cold drawn wires made from unalloyed high carbon steel. These wires find application in Construction, Mining, Shipping and various other Heavy Industries.

These wires are generally supplied in phosphate and oiled condition.

Specifications:

Standard: IS: 1835-1976

Diameter: 0.30 mm to 6.0 mm**

Packing: The wires are supplied in weight of 10-250 kgs., depending on size of wire. The coils are oiled and packed with polythene and Hessian.

Applications: Wire ropes

Galvanized Steel Wires

These wires are patented galvanized drawn wires manufactured from High Carbon Steels. These wires are used for manufacture of Auto Cables, Steel Wire Ropes, Cold formed Helical Springs and Wire Forms.

Specifications:

Diameter: We supply these wires in the range 0.22 mm to 3.0 mm.

Standard: IS:4454(Part 1), Grade 1 & 2 and also as per IS:1835

Packing: The coil weight is generally maintained in range or 10 to 200 kgs. depending on the size of the wire.

Galvanized spring steel wires are normally packed with polythene & Hessian cloth.

Needle Wires

Needle wires are bright annealed and drawn High Carbon Steel.

Needle wires are used in Hand sewing and Hosiery Industries.

Specifications:

Diameter: Range 0.76mm to 4.0mm.

Packing: The finished wires are dipped in rust preventive oil, and packed with polythene and Hessian.

Conveyor Belt Wires

CONVEYOR BELT WIRES Wires for Conveyor Belts are bright annealed and drawn. Wires are offered in both round and flat cross sections for Conveyor Belts.

Specifications:

Diameter

Round Wire: 0.80 mm to 5.0 mm

Shaped Wire: 0.8 x 1.0 mm to 6.0 x 1.5 mm

Packing: The finished drawn wires are dipped in rust preventive oil, securely bound at four places and packed with polythene and Hessian.

LOW CARBON STEEL WIRES (MS)

(Mild Carbon Steel Wires)

BWIL offers Low Carbon Steel in Wires & Bright Bars for various applications. They are known for varied industrial usages for their ductility and softness.

We offer various sizes and cross sections for the same.

Specifications:

Product: HB, HHB, EQ.

Cross Section: Round, Square, Rectangular & Trapezodial Section

Grade: SAE/AISI1006, 1008, 1010, 1012, 1015, 1018, 1020 etc.

Size

Round Wire: 0.40mm to 16.00mm**

Shaped Wire: As per customer's requirement

Condition: Drawn, Annealed, Annealed Drawn, Normalized in Black condition.
Also, Coated with rust preventive oil as required by customer.

Coil ID: 200mm to 1000mm

Coil Weight: As per customer's requirement

Packing: Polythene/Hessian Cloth

Applications: Needles, Safety Pins, Steel Fibers, Steel wools, Nuts, Bolts, Rivets, Studs, Nails, Wire Mesh, Weld Mesh, Screws, Chains, Cut Shots, Staples Pins, Kitchen Ware, Decorative Items & other for General Engineering Purposes.

Cold Heading Quality Wires

Specifications:

Product; HB, HHB, Drawn Round Wires and Bright Bars.

Grades: (A) Mild Steel Wires - SAE/AISI 1006, 1008, 1010, 1012, 1015, 1018 and 1020

(B) Boron Steel Wires- 10B21, 15B25, 10B33, 15B41, 19MNB4 and 51B37

(C) Free Cutting Wires - EN1A, 12L14 and EN1A (L)

(D) Alloy Steel Wires - EN 18D, SAE 1541, 4135, 4140, SCM 415, SCM 420,16
MNCR5

Sizes: Up to 16.00mm

Condition: Drawn, Annealed, Spheriodised Annealed , Annealed Drawn and
Phosphated Condition.

Coil ID Up to: 1000mm

Coil Weight: As per customer's requirement.

Packing: Polythene/Hessian Cloth

Applications: Nuts, Bolts, Screws, High Tensile Fasteners, Automobile
components, Studs, Ball Pins, Wheel Bolts & Philips Head Screws

ALUMINIUM ALLOY WIRES (AA)

Magnesium is the primary constituent in this alloy. AA is moderate strength, non-heat treatable alloy that combines its Strength with excellent Formability & Corrosion Resistance. Aluminium's unique combination of properties make it a highly versatile material when alloyed with various metals. Besides light weight characteristics and corrosion resistance property it's excellent workability make it a natural choice for industrial use.

AA wires are used in many products by the leaders of the industry as raw material.

Specifications:

Diameter	0.12 mm - 6.00 mm"
Type (Modulus)	Single Filar, Bifilar, Tri Filar, Tetra Filar (Quadri Filar)

Applications:

- Flexible cables
- Coaxial cables
- Wire used Electrical Appliances,
- Water-Bottle Carver/parcel grids for bicycles
- Mosquito Nets
- Foodstuff Clips, Metal Staples (example for Sausage Type foods, Tea Bags}
- Lightning Conductors
- Clips, Staples for Staplers, Paper Clips
- Clothes Pegs, Aluminium Clothes Hangers, usually used by Dry Cleaners
- Refrigerator Grilles
- Pipe Hose for Sanitary Fittings
- Pipe Hose for Low Pressure Drinking Water, for Low Pressure Oil, Air and Petrol, Anti-vibration Tubes
- Steel Deoxidizer In the Continuous Casting process
- Shots
- Rivets

Copper Coated Aluminium Magnesium Wire

Copper-coated aluminium magnesium wire, commonly abbreviated as CCAMW or CCAM, is an electrical conductor composed of an inner aluminium core and outer copper coating.

Diameter: 0.12 mm - 2.05 mm"

USES: The primary applications of this conductor revolve around weight reduction requirements. These applications include high-quality coils, such as the voice coils in headphones, or portable loud speakers; high frequency coaxial applications; such as RF antennas; CATV distribution cables; and power cables. CCAM is also being used in electrical wiring for buildings. The copper/aluminium construction was adopted to avoid some of the problems with aluminium wire, yet retain some of the cost advantage.

CCAM became extremely popular in emerging markets as a cheap replacement for copper category 5e twisted pair cables.

Properties:

The properties of copper-coated aluminium wire include:

- Lighter than pure copper
- Higher electrical conductivity than pure aluminium
- Higher strength than aluminium
- Better solderability than aluminium, due to the lack of the oxide layer which prevents solder adhesion when soldering bare aluminium.
- Less expensive than a pure copper wire

Skin Effect:

The skin effect causes alternating current to concentrate on the more-conductive copper coating of the conductor, causing the resistance of the wire to approach that of a pure copper wire at high frequencies, which

makes the copper-coated aluminium wire a good fit for such applications. The skin effect is also utilized in copper-coated steel wire such as RG-6 coax, which is also commonly used in high frequency applications with high strength requirements.

Copper Coated Steel Wire

Copper Coated Steel Wire, commonly abbreviated as CCS is an electrical conductor composed of an inner mild steel core wire and outer copper coating.

Specifications:

Diameter	0.71 mm - 2.25 mm."
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Features:

- High intensity: is 2 times that of pure copper wire that is if the tensile strength of pure copper wire is about 215 to 265, then CCS can reach 430 to 530.
- Light weight: lighter 13% than pure copper wire. Under the same wire size and weight, its length is 1.13 times that of pure copper wire. So buying 1 ton of CCS wire is the same as buying 1.13 tons of pure copper wire.
- Saving cost: CCS wire price is just 35% of that of pure copper wire and its appearance quality is the same as pure copper wire.
- Reducing greatly the production cost while guaranteeing the same quality as well as pure copper wire.

Main Properties:

- Good corrosion resistance of copper
- High tensile strength of steel
- Much lower impedance at high frequencies than that of steel wire alone

Application:

- Inner conductor of terminal CATV coaxial cable
- Conductive cord of user communication cable for double conductor telephones.
- Plug-ins for electronic components.
- Conductive cord of field wires.
- Overhead system for power transmission and telephone lines.
- Overhead-contact systems for railway and Light Rail Transit.
- Braided shield wire of power cable.

Dia (mm)	"Copper Conductivity (%)"	"DC Resistance at 20°C 1 (Ohm/Km)"
0.835	0.26	121
1.05	0.16	124.3
1.05	0.18	110.5
1.05	0.21	94.7
1.85	0.26	24.6
2.25	0.21	20.6

Aluminium Alloy Wire Mesh

Precision made INSECT GUARD is manufactured to the international standards and specifications.

Specifications:

Mesh	18x14, 18x16, 14x14, (Cutomized as per requirement)
Material	Aluminum Alloy Wire
Available Widths	2ft, 2.5ft, 3ft, 3.5ft, 3.75ft, 4ft, 4.5ft, 5ft
Length/ Roll in Meters	30 Metres (Cutomized as per requirement)
Finish	Aluminium Finish, Stainless Steel Finish
Packaging	One Roll Per Cardboard

GALVANIZED WIRES (G.I)

These are mild carbon or high carbon steel wires, which are coated with Zinc , so as to impart the base wire with superior properties.

The Zinc coated galvanized wires are highly resistant to Moisture and mechanical damage (than other surface coatings), and have a very bright and smooth surface finish.

Diameter: 0.37 mm to 5.0 mm

Hot Dip Galvanized Wire (G.I.)

BWIL offers Hot Dip G.I. Wires of consistent mechanical properties, uniform zinc coating, bright surface finish.

Zinc Coating is done through Hot Dip Galvanizing process.

Specifications:

Diameter	0.37 mm to 5.0 mm
Standard	IS:280-2006/as per customer
Zinc Coating	30 to 290 Gms/Sq Mt

Size mm		1.25	1.40	1.60	1.80	2.00	2.24	2.50	2.80	3.15	3.55	4.00	4.50	5.00
Tolerance mm (+/-)		2.5% FOR ALL SIZES												
Tensile Strength Mpa		300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550	300 - 550
Zinc Coating Gm/Sq.Mt.	Light	40	50	60	60	70	70	80	90	100	110	120	130	130
	Medium	90	90	95	95	105	105	110	120	120	135	135	150	150
	Heavy	180	200	210	230	240	240	260	260	270	270	280	290	290

We also offer, G.I Cable Armour Wire as per IS: 3975-1999 for use in cable industry.

High carbon G.I. wires for ropes, springs, wire mesh etc. are offered too.

Applications: Poultry Mesh Chain Link Fencing, Barbed Wires, Galvanized Fencing Wire, Fine Wire Mesh, Trolleys, Baskets, Stranded Ropes, Stay Wires, Bailing Wires, Telegraph /Telephone Wires, Gabbian Mesh Wires etc.

Electro-Galvanized Wires(G.I.)

Zinc Coating is done through Electro-Chemical Process, also called as Cold Dip Wires. The Zinc Coating varies from 5 -10 gms/sq.mtr.

The tolerance of these wires is (+1-) 2.5%. The UTS ranges from 300 to 550 Mpa.

Specifications:

Diameter	Range 0.37 mm to 5.00**mm
Application	Welded wire mesh, filters etc

Galvanized Steel Core Wire for ACSR Conductors

Specifications:

Diameter	1.57 MM to 4.09 MM
Quality	Commercial & ISI
Standards	IS : 398 (P 2) - 1996 , IS:398(P5)-1996, BS EN 50189:2000
Applications	Cables & Conductors G.I Wires can also be manufactured as per customers specifications.

SPECIAL GALVANIZED WIRE FOR EXPLOSIVE INDUSTRIES (DETONATOR WIRE)

Diameter: 0.47mm

Quality: Soft

Resistance: 0.65 to 0.80 ohm / m

UTS: 350 N / nm² (minimum)

Elongation: 15% (Minimum)

Zinc Coating: 20 grm/nm² (minimum)

Application: Detonator