ELSEWEDY
STEEL

TIRE BEAD WIRE

Tire Bead Wire is a high-strength steel wire used to reinforce the bead section of radial and bias-ply tires across all vehicle categories. It plays a critical role in maintaining the tire's shape under internal pressure and external forces, ensuring a secure fit to the rim and consistent performance. Tire bead wire is engineered for maximum strength, fatigue resistance, and adhesion, making it a trusted solution for rubber product manufacturers and the global tire industry.

Key Features

Available in diameters from 0.7 mm to 3 mm, the wire is coated with bronze containing 1% to 12% tin for enhanced rubber adhesion. Coating composition and tensile strength are tailored to customer needs. Supplied on industrial spools, it is manufactured under strict quality control to ensure consistency and performance.

Application

Tire Bead Wire is designed for use in a wide range of products that demand structural reinforcement and rubber adhesion. It is used in tires for passenger cars, trucks, aircraft, and specialty vehicles. It's also suitable for high-pressure hoses and flexible ducts. Its strength, flexibility, and bonding capability make it ideal for demanding rubber-based applications.
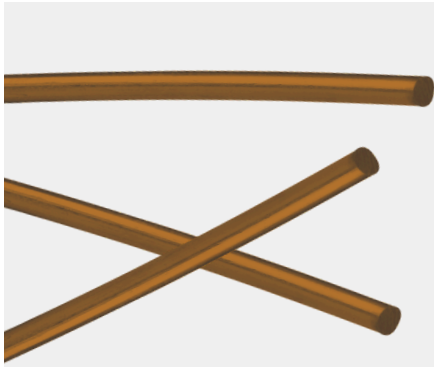
Global-grade
performance powered by
advanced wire drawing
and coating excellence

Mechanical Properties

TIRE BEAD WIRE
TECHNICAL SPECIFICATION

Standard Units

		Reelles Coil C1000	Metal Reel BS 450/6	Metal Reel BS 900	Me 1150 tal Reel BS
Diameter of Flange	mm	-	760	760	760
Diameter of Barrel	mm	-	437	355	355
Overall Width	mm	-	38.5	345	385
Traverse	mm	-	385	320	320
Bore	mm	-	280	70.5 or 33	70.5 or 33
Number x Diameter of Drivehole	mm	-	70.5	2/20+2/35	2/20+2/35
Distance Drivehole/Bore	mm	-	2/35	63.5 + 115	63.5 + 115
Overall Diameter	mm	720	115		
Core Diameter	mm	355	-		
Approx. Wire Capacity	kg	445	445	450	520

low Tin: Sn: 1-3 %, Cu: 99-97 %
High Tin: Sn: 6-12 %, Cu: 94-88 %   Coating composition as per customer requirement can be manufactured

*Adhesion Force: Adhesion requirement, Test parameters (Curing time, Temperature, Pressure, mold width) and rubber compound to be provided by the customer.

Note
1. If there are any specific characteristic requirements differing from those specified above like Breaking strength, Yield Strength, Coating weight, Coating composition etc. the same to be shared with us to carry out feasibility study and confirm.
2. Packing: Spool / coil dimensions to be provided by the customer.

TIRE BEAD WIRE
TECHNICAL SPECIFICATION

Technical Specifications

Wire Diameter (mm)	Tolerance (mm)	Tensile Type	Tensile Class (N/mm²)	Breaking Force Minimum (N)
0.89	+/- 0.02 +/-	NT	≥ 2100	≥ 1200
0.965	0.02 +/-	NT	≥ 2000	≥ 1350
1.42	0.02 +/-	NT	≥ 1950	≥ 2880
1.55	0.02 +/-	NT	≥ 2000	≥ 3525
1.65	0.02 +/-	NT	≥ 1850	≥ 3680
1.82	0.03 +/-	NT	≥ 1650	≥ 3970
2.0	0.03 +/-	NT	≥ 1800	≥ 5260
3.0	0.03 +/-	NT	≥ 1750	≥ 11000
0.89	0.02 +/-	HT	≥ 2350	≥ 1350
0.965	0.02 +/-	HT	≥ 2250	≥ 1530
1.295	0.02 +/-	HT	≥ 2250	≥ 2795
1.55	0.02 +/-	HT	≥ 2200	≥ 3900
1.6	0.02 +/-	HT	≥ 2200	≥ 4150
2.0	0.03 +/-	HT	≥ 2100	≥ 6205
2.2	0.03	HT	≥ 2100	≥ 6864

Sizes and Tensile strengths as per customer requirement can also be manufactured

ELSEWEDY STEEL is able to supply any bead wire diameter between **0.7 and 3 mm** Bronze coating from 1 to 12% Sn.

Standard Packing Units

Reels Type	Number	Protection	Length (mm)	Width (mm)	Height (mm)	Approx. Tare (kg)	Approx. Net (kg)
C 1000	2	Cardboard	765	765	730	28	890
C 1000	2	Polyethylene	765	765	740	30	890
900	3	Polyethylene	1160	760	150	306	450
1150	3	Polyethylene	1280	760	150	327	520

HANDSAMPLES
Upon request, a number of samples are provided.
Per reel, 10 pieces of wire, each 450 mm long, are put in a plastic bag with desiccant, which goes with the shipment.

ORDERING PROCEDURE
Inquiries or orders of bead wires must specify:
- Dimensions and Type of Wire, Type of Coating, Type of Reel, Total Quantity.
- Customer specific Requirements if any.
- National/International Standard to be followed.

RETURN OF PACKING
Spools and Pallets (cages) are to be returned to the plant of origin.