



**SANDHYAFLEX**

ISO 9001:2015 certified company

## **Binding Wire**

### **TECHNICAL DATASHEET**

**Sandhyaflex Binding Wire** is a high-performance fastening and tying solution designed to provide secure binding, reinforcement support, and reliable joining in construction, industrial, agricultural, and general engineering applications. Manufactured from high-quality low carbon steel wire, these wires are engineered to deliver excellent flexibility, tensile strength, ductility and long-term durability under demanding operating conditions. The uniform surface finish and controlled mechanical properties ensure dependable performance throughout their service life.

Designed for applications where flexibility, tying efficiency and mechanical strength are critical, Sandhyaflex Binding Wires are available in multiple gauges, coil sizes and finishes to suit diverse requirements. The carefully controlled manufacturing process provides enhanced ductility and dimensional stability while maintaining excellent workability for easy handling and installation. These wires facilitate secure fastening with minimum effort and provide reliable performance in demanding construction and utility applications.

**SANDHYAFLEX INDIA PVT LTD** has established itself as a trusted manufacturer and supplier of premium-quality Binding Wires in India, delivering products that combine optimum performance, durability, and reliability. Manufactured using high-grade low carbon steel and specially selected processing techniques, these wires are designed to withstand varying environmental and service conditions while maintaining their physical and mechanical properties.

#### **Overcoming Challenges, Delivering Excellence:**

Construction and fastening systems often face challenges such as wire breakage, inadequate flexibility, corrosion, environmental exposure, and long-term material degradation. These factors can adversely affect structural integrity, resulting in increased maintenance requirements and reduced service life.

Recognizing these challenges, SANDHYAFLEX developed its Binding Wire, manufactured from high-quality low carbon steel to provide reliable fastening performance and structural stability. The material exhibits excellent flexibility, tensile strength, and resistance to mechanical stresses, making it particularly suitable for construction, industrial, and utility applications.

By delivering a durable, flexible, and high-performance solution, SANDHYAFLEX Binding Wires have become a preferred choice for reinforcement tying, construction works, industrial

fastening, agricultural applications, and general-purpose binding applications where strength, flexibility, and long-term reliability are of paramount importance.

### Key Features:

- Manufactured from high-quality low carbon steel.
- Excellent flexibility and ease of handling.
- Uniform diameter and consistent quality.
- High tensile strength for secure fastening.
- Excellent ductility and bendability.
- Smooth surface finish for easy tying operations.
- Resistant to mechanical damage during handling.
- Suitable for manual and automatic tying operations.
- Available in annealed, galvanized and black wire variants.
- Provides reliable fastening and reinforcement support.
- Resistant to weathering and environmental exposure.
- Durable construction designed for long service life with low maintenance.
- Available in various gauges, coil weights, and lengths as per customer requirements.
- Easy to install and suitable for indoor and outdoor applications.
- Provides reliable performance under varying operating conditions.

### Applications:

- **Reinforced Concrete Construction:** Suitable for tying reinforcement bars and cages.
- **Building and Infrastructure Projects:** Used for secure fastening and binding operations.
- **Industrial Applications:** Suitable for general fastening and tying purposes.
- **Agriculture Sector:** Used for fencing, crop support, and bundling operations.
- **Packaging Industry:** Suitable for securing and bundling materials.
- **Manufacturing Industries:** Used in assembly and fastening applications.
- **Engineering Workshops:** Suitable for general-purpose tying and fixing operations.
- **Wire Mesh Production:** Used in fabrication and reinforcement applications.

- **Automobile Industry:** Suitable for fastening and utility purposes.
- **Utility and Maintenance Operations:** Used for various repair and maintenance applications.
- **Public Infrastructure Projects:** Widely used in construction and engineering works.
- **Textile and Engineering Industries:** Suitable for bundling and securing operations.
- **Hardware and Building Material Suppliers:** Used as a standard construction accessory.
- **Household and General Applications:** Suitable for day-to-day fastening and tying requirements.

### History of Binding Wires:

- **Early 1900s** – Steel wires became widely used for fastening and reinforcement applications.
- **1950s** – Development of controlled wire drawing techniques improved strength and flexibility.
- **1960s** – Introduction of annealing processes enhanced ductility and workability.
- **1970s** – Increasing construction activities accelerated demand for high-quality binding wires.
- **1980s** – Advances in steel processing improved dimensional accuracy and consistency.
- **1990s** – Widespread adoption of galvanized and annealed wires expanded industrial applications.
- **2000s** – Improvements in manufacturing and quality control increased product reliability.
- **2010s** – Growth of infrastructure and construction projects increased the demand for premium-quality binding wires.
- **2020s** – Modern Binding Wires continue to play a vital role in construction, industrial, and agricultural applications worldwide, providing long-term durability, flexibility, and operational reliability.

### Physical and Mechanical Properties of Sandhyaflex Binding Wire:

S. No.	Property / Test	Requirement
1	Product Type	Binding Wire
2	Material Composition	Low Carbon Steel Wire
3	Colour	Black Annealed, Galvanized Silver, or Other Specified Finishes
4	Construction Type	Single Strand Steel Wire
5	Surface Configuration	Smooth and Uniform
6	Outer Surface Finish	Black Annealed or Galvanized Finish
7	Tensile Strength	Moderate to High
8	Breaking Strength	High

9	Flexibility	Excellent
10	Elongation Characteristics	Excellent Ductility and Bendability
11	Heat Ageing Resistance	Excellent Retention of Physical Properties
12	Temperature Range	Suitable for Normal Ambient Conditions
13	Moisture Resistance	Good
14	Corrosion Resistance	Excellent in Galvanized Grades
15	Chemical Resistance	Resistant to Mild Atmospheric and Industrial Conditions
16	Abrasion Resistance	Good Resistance to Wear and Surface Damage
17	Weather Resistance	Good Resistance to Humidity and Ageing
18	Impact Resistance	Good Resistance to Mechanical Handling
19	Dimensional Stability	High
20	Flexural Performance	Excellent Bendability and Twistability
21	Service Life	Long-Term Durable Performance
22	Operating Environment	Indoor and Outdoor Applications
23	Typical Applications	Reinforcement Binding, Construction, Agriculture, Packaging and General Engineering Applications
24	Country of Origin	Made in India
25	Availability	Available in Standard and Custom Sizes
26	Maintenance Requirement	Low

### Usage Tips:

- **Select the Correct Wire Gauge:** Always choose the wire diameter and tensile properties suitable for the intended application.
- **Verify Strength Requirements:** Ensure the binding wire meets the load and fastening requirements.
- **Avoid Excessive Twisting:** Prevent over-tightening or repeated bending that may cause breakage.
- **Inspect Before Use:** Check for rust, kinks, surface defects, or damage before installation.
- **Use Appropriate Tools:** Employ suitable pliers or tying tools for efficient and secure fastening.
- **Protect from Corrosive Environments:** Use galvanized binding wire where corrosion resistance is required.
- **Avoid Mechanical Damage:** Prevent crushing, excessive stretching, or rough handling.
- **Use in Designated Applications:** Suitable for reinforcement tying, packaging, fencing, and general fastening applications.
- **Follow Applicable Engineering Practices:** Ensure installation complies with project requirements and safety procedures.

- **Use Qualified Personnel:** Installation and fastening operations should be performed by trained personnel.

### Maintenance and Care:

Maintaining Sandhyaflex Binding Wire is simple and helps ensure long service life and reliable performance:

- **Regular Inspection:** Periodically inspect wire coils for rust, breakage, kinks, or signs of deterioration.
- **Keep Clean:** Remove dirt, oil, grease, and contaminants using a clean cloth.
- **Store Properly:** Store in a cool, dry place away from moisture and corrosive chemicals.
- **Avoid Chemical Exposure:** Prevent prolonged exposure to acids, alkalis, and aggressive chemicals.
- **Prevent Mechanical Damage:** Avoid excessive stretching, crushing, or impact.
- **Protect During Handling:** Handle carefully to prevent deformation and tangling.
- **Maintain Proper Storage Conditions:** Store coils on dry platforms and away from direct contact with water.
- **Replace Damaged Material:** Discard wire showing excessive rust, deformation, or reduced mechanical performance.

### Applications by Countries:

#### **India**

- Widely used in reinforced concrete construction, infrastructure projects, and agricultural applications.
- Commonly employed for reinforcement tying, fencing, and packaging purposes.
- Growing demand in construction, manufacturing, and engineering industries.

#### **China**

- Extensively used in construction, wire mesh manufacturing, and industrial fastening operations.
- Commonly employed in infrastructure and utility applications.
- Preferred for large-scale building and engineering projects.

## **United States**

- Widely used in construction, agriculture, and packaging industries.
- Commonly installed in reinforcement and general fastening applications.
- Increasing adoption in commercial and industrial sectors.

## **Europe**

- Preferred for construction, engineering, and agricultural applications.
- Commonly used in precast structures and reinforcement work.
- Strong demand driven by durability and reliable performance requirements.

## **Middle East**

- Extensively used in infrastructure projects, construction activities, and industrial facilities.
- High demand in commercial developments and utility installations.
- Suitable for demanding environmental conditions.

## **Africa**

- Used in construction, agriculture, and public infrastructure developments.
- Important for reinforcement tying and fencing applications.
- Growing adoption due to durability, flexibility, and cost-effectiveness.

## **Southeast Asia**

- Widely used in construction, manufacturing, and agricultural applications.
- Commonly installed in infrastructure and packaging industries.
- Increasing demand due to rapid urbanization and industrial growth.

## **Australia**

- Preferred for construction, farming, and industrial operations.
- Commonly employed in reinforcement tying and fencing applications.
- Growing use in infrastructure and agricultural sectors due to excellent workability and ease of handling.

## **Get in touch:**

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