Copper Bonded Rod Datasheet

Product Description:

- **Product Name:** Copper Bonded
- **Copper Coating Thickness:** 250 microns

Sizes:

- **Diameter:** 17.2 mm, **Length:** 1 meter
- **Diameter:** 17.2 mm, **Length:** 2 meters
- **Diameter:** 17.2 mm, **Length:** 3 meters

Technical Specifications:

Property	Value
Material	High tensile low carbon steel core, electrolytic grade copper coating
Copper Purity	≥ 99.9%
Copper Coating Thickness	250 microns
Resistance To Corrosion	High
Adherence of Copper To Steel	High

Mechanical Properties:

- **Breaking Load:** High, suitable for driving into the ground.
- **Impact Strength:** Sufficient for withstand mechanical hammering without deformation.

Electrical Properties:

- **Conductivity:** Excellent due to the pure copper coating.

- **Resistance:** Low, ensuring efficient grounding.

Standards Compliance:

- **Compliance:** IS Standards (IS 3043 for earthing), ANSI/IEEE, UL467, BS EN 50164-2, and other relevant international standards.

Features and Benefits:

- **Corrosion Resistance:** The thick copper coating ensures excellent resistance to corrosion, providing long-term reliability and performance.
- **High Conductivity:** Ensures efficient grounding and dissipation of fault currents.
- **Durability:** Robust construction withstands harsh environmental conditions and mechanical stress.
- **Easy Installation:** Can be driven into the ground easily due to its mechanical properties.

Applications:

- **Residential Earthing**:
  - Used in homes to provide effective earthing, ensuring safety against electrical faults and lightning.
- **Commercial and Industrial Buildings**:
  - Installed in factories, offices, and other commercial setups to establish a reliable grounding system.
  - Protects sensitive equipment from voltage surges and electromagnetic interference.
- **Telecommunications Towers**:
  - Provides earthing for telecom masts to protect against lightning strikes and electrical surges.
- **Electrical Substations**:
  - Utilized in substations to establish a low-resistance path for fault currents, improving the safety and reliability of electrical systems.

Renewable Energy Installations:

- Used in solar farms and wind turbines to ensure proper grounding and system protection.

- **Lightning Protection Systems**:
  - Acts as a key component of lightning protection systems, helping to safely dissipate the energy of lightning strikes into the ground.

Installation Instructions:

- **Site Selection:** Choose a location with minimal risk of physical damage and accessible for maintenance.
- **Driving the Rod:** Dig a hole with a diameter of three inches and a depth equal to the height of the copper-bonded rod.
- **Connection:** Securely connect the grounding conductor to the rod using suitable clamps or connectors.

Other Size:

Size	Diameter (mm)	Length (m)
Rod A	20	1
Rod B	20	2
Rod C	20	3
Rod A	25	1
Rod B	25	2
Rod C	25	3

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This datasheet provides detailed information about the **Copper Bonded Rods** in various sizes, ensuring all relevant technical and application-specific details are covered for users and installers.