

## **IS 7814 : 2005 Phosphor bronze sheet, strip and foil - Specification (Second Revision)**

**Phosphor bronze sheet, strip, and foil** are versatile forms of metal alloyed from copper, tin, and phosphorus, valued for their strong mechanical properties, corrosion resistance. Known for its high fatigue strength, phosphor bronze is well-suited for applications requiring durability and resilience, such as springs, bearings, and various industrial components. The alloy's excellent wear resistance, good formability, and ease of machining make it ideal for precision parts that demand both accuracy and reliability. Available in different thicknesses and grades, phosphor bronze sheets, strips, and foils cater to a wide range of requirements across electrical, electronic, and mechanical industries.

Consumers seek high-quality **phosphor bronze sheets, strips, and foils** with specific attributes to ensure reliable performance in diverse applications. Purity of material—with precisely balanced amounts of copper, tin, and phosphorus—guarantees optimal **strength** and **durability**. Consistent thickness and **dimensional accuracy** are essential for easy processing and stable function, especially for precise parts. **Corrosion** and **oxidation resistance** further enhance product longevity, particularly in moisture-exposed or outdoor environments. **Mechanical strength** and **fatigue resistance** are important for parts that experience repeated stress. Lastly, a smooth, defect-free surface finish improves both appearance and corrosion resistance, ensuring consumers receive a **durable**, high-performing product suitable for demanding applications across industries.

This Indian Standard specifies four grades of rolled **phosphor bronze sheets, strips, and foils**, detailing requirements for material supply, freedom from defects, delivery conditions, chemical composition, and mechanical properties. The standard includes tables for each grade's chemical composition, tensile strength, elongation, hardness, and bend test specifications. It also provides guidelines for preferred inside diameters for coiled strips and foils, thickness and width tolerances, and permissible camber values. Sampling procedures and conformity assessment criteria are also defined, covering lot formation, visual and dimensional inspections, chemical composition analysis, and mechanical property testing, along with retest procedures when initial results do not meet specified standards.