

IS 5478 : 1969 for The product Thermostat Metal Sheets

The Indian Standard IS 5478 : 1969 specifies the requirements for thermostat metal sheets and strips. This standard is essential for manufacturers and suppliers in ensuring that their products meet the necessary quality and performance requirements. This standard provides guidelines for evaluating the chemical composition, physical properties, and overall performance of these materials.

What is Thermostat Metal

Thermostat metal is a composite material typically used in applications requiring temperature regulation. It is characterized by its ability to change shape in response to temperature variations due to the differing coefficients of linear expansion of its components.

Applications of Thermostat Metal

Thermostat metals are widely used in various sectors, including:

- Automotive: For temperature control systems.
- Aerospace: In components that require precise thermal management.
- Home Appliances: In thermostats for heating and cooling systems.

Chemical Composition

The chemical composition of thermostat metals must conform to the supplier's specifications to achieve desired physical properties.

Physical Properties

The standard specifies several physical properties that thermostat metals must meet:

- Flexivity: The ability to flex in response to temperature changes.
- Hardness: Measured through standardized tests to ensure durability.
- Electrical Resistivity: Important for applications involving electrical components.

Temperature Ranges

The standard defines necessary temperature ranges for thermostat metals:

- Linear Deflection Range: The temperature range within which the flexivity remains effective.
- Maximum Temperature: Suppliers must specify the maximum temperature for which the material can be used without permanent deformation.

Dimensions and Tolerances

The standard provides for the permissible variations in thickness and width of the sheets and strips. Accurate dimensions are essential for ensuring compatibility with other components in a system.

Flat Lengths and Coils

Manufacturers must provide materials in specified lengths or coils, adhering to tolerances set forth in the standard.

Bond Integrity

The bond between component materials must be robust and complete, as assessed through agreed testing methods.

Workmanship and Finish**Surface Quality**

The surface of thermostat metals must be free from defects such as cracks, seams, and blisters. This ensures that the materials perform effectively in their intended applications.

Edge Treatment

Edges should be slit without excessive burrs or distortions to maintain the quality of the metal and facilitate integration into other components.

IS 5478 is necessary for manufacturers and suppliers in the thermostat metal industry. By following these standards, businesses can ensure quality, safety, and reliability in their products, ultimately contributing to advancements in various applications.