



Indian Standard IS 302 : PART 2 : SEC 15 : 2009 – Guide for safety of Electrical Appliances for Heating Liquids

Appliances for heating liquids are integral to everyday life, especially in the **kitchen**. Common examples of such appliances include **Electric Kettle, Coffee-makers, Egg boilers, Electric Rice Cookers, Yogurt Makers** etc. Appliances for heating liquids are devices specifically designed to raise the temperature of liquids, typically water, for various purposes such as **cooking, cleaning** or **heating**. These appliances work by converting **electrical energy** into **heat**, which is then transferred to the liquid.

One of the key aspects considered by the consumer while purchasing **electric appliances** is the **safety** of the appliance. **Safety** of the appliance includes **Electrical Safety, Thermal Safety** and **Mechanical Safety**. When purchasing any electric appliance, it's a good idea to prioritize safety **certifications** that meet the **regulatory standards** for **electrical safety**. The **Indian standard IS 302-2-15** developed by Bureau of Indian Standards (**BIS**) deals with the **safety requirements for appliances intended to heat liquids** (such as **electric kettles, water heaters, coffee makers**, etc.). The IS 302-2-15 is part of the broader **IS 302** standard, which specifies the safety requirements for household and similar electrical appliances. **IS 302-2-15** is similar to **IEC 60335-2-15** which gives confidence to the consumer that the product is tested according to international standards.

The **safety** of appliances used to heat liquids is of paramount importance due to the combined risks of electricity and high temperatures. **IS 302-2-15** provides a thorough framework for manufacturers to ensure that these appliances are safe for consumers. The standard addresses key safety issues such as **electrical shock protection, thermal injury, fire prevention, mechanical safety, and water resistance**. Adherence to IS 302-2-15 ensures that these appliances meet the necessary safety standards to protect users from **injury, fire, and electrical hazards**, while also promoting product durability and reliability.

The **DPIIT Quality Control Order** mandates that all **electrical appliances** for heating liquids sold, manufactured, or imported in India comply with IS 302-1 and display the **BIS Standard Mark**, ensuring high safety for Indian consumers.

In summary, **IS 302-2-15** gives the confidence to consumers that the appliances that are purchased by them are **safe and reliable**. While purchasing appliances like **Kettles, rice cookers, coffee makers** etc. look for the standard mark on the appliance and safeguard yourself against electrical shocks and burns.