

## IS 1660 ~ WROUGHT AND CAST ALUMINIUM UTENSILS

Wrought and cast aluminum utensils are commonly used due to their **affordability, lightweight nature, and good heat conductivity**. Indian Standards prescribes general requirements for wrought and cast aluminum utensils upto 30 litres capacity and they are named as **utensils, thick bottom utensils, Compartmental trays and Lunch boxes**. Utensils are classified as Heavy, Medium and Light and thickness varies for all the 3 class.

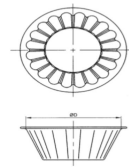
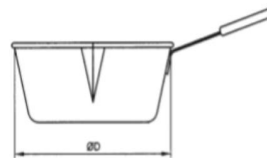
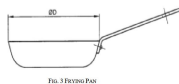


FIG. 15 PATTY (JILLY) MOLDS FOR BAKING AND TRAYS

The standard specifies that the aluminium used in utensils must have a minimum **purity** of 99.0%, as per IS 737. Limits are defined for impurities such as iron, silicon, copper, and manganese to ensure corrosion resistance and safety during food contact.

The utensils should be well-formed with **smooth surfaces, free from cracks**, dents, and sharp edges that may compromise the safety and usability of the product.

The standard specifies permissible tolerances for dimensions such as **thickness, diameter, and depth of the utensils** to ensure uniformity in manufacturing. Along with main body material, specifications are given for materials used for lid, tempered glass lid, strips, clips of lunch box, handles and knobs, screws, nuts and rivets also. This standards makes sure that the materials are **resistance to corrosion** as it directly impacts food safety and utensil longevity. Performance test to ensure the arrangement of body and lid of lunch box is specified. **Leakage test** for lunch box is also important. **Fragmentation test, drop test and thermal shock test** are crucial for tempered glass lid of utensils.

The surface of the utensils may be polished, **anodized, or coated** to improve appearance and resistance to corrosion. Anodizing should conform to IS 1868. It should exhibit sufficient hardness to withstand wear and tear, impact, and repeated use especially the cookware id hard anodized. The coating shall be **free from perfluorooctanoic acid(PFOA) and bisphenol A (BPA)**. Coating material shall be **free from toxic metals**.

IS 1660 ensures that wrought aluminium utensils are manufactured to meet high standards of quality, safety, and performance. Compliance with the standard guarantees that the utensils are safe for use in food preparation, durable, and resistant to wear and corrosion, providing consumers with reliable and long-lasting products.

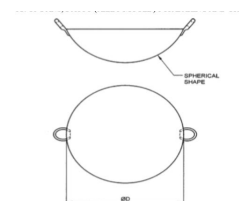
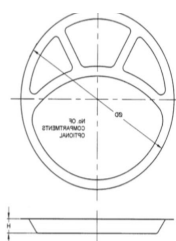
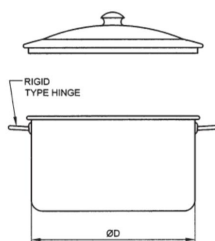


FIG. 16 KARHI KADAI/APPACHETTI