

## **Summary of IS 6685 : 2009 (Life jackets - Specification)**

**IS 6685:2009** specifies the requirements for life jackets used by adults and children for safety during water-related activities. These jackets are designed to ensure buoyancy, ease of donning, durability, and comfort, serving as a vital life-saving device in both occupational and recreational water environments.

Consumers prioritize safety, reliability, and comfort in life jackets. Key quality parameters include:

- **Buoyancy and Stability:** Ensuring sufficient lift to keep the mouth of the wearer above water, even when unconscious.
- **Durability:** Resistance to damage under conditions such as water immersion, temperature fluctuations, and exposure to sunlight and saltwater.
- **Ease of Use:** Quick donning capability, clear markings for size and orientation, and lightweight design for mobility.
- **Visibility and Detection:** High visibility colors and retro-reflective materials for better detection in low-light conditions.
- **Comfort:** Comfortable fit, allowing freedom of movement, and avoiding irritation or injury during prolonged use.

IS 6685:2009 comprehensively addresses these consumer expectations through structured specifications:

1. **Design and Performance:**
  - Requires life jackets to turn an unconscious person face-up in 5 seconds and provide at least 120 mm mouth clearance from the water.
  - Ensures buoyancy materials, such as unicellular plastics, kapok, or cork, meet stringent safety criteria.
  - Includes impact resistance tests to withstand jumps from heights without damage or displacement.
2. **Durability and Safety:**
  - Mandates resistance to fungal attack, sunlight, oil, and saltwater, alongside low flammability.
  - Requires robustness through temperature cycling and mechanical strength tests.
3. **Visibility and Markings:**
  - High-visibility colors like traffic yellow and light orange and mandatory retro-reflective material placement.
  - Clear labeling for size, use instructions, and compliance markings.
4. **Testing and Sampling:**
  - Detailed sampling plans and testing protocols for buoyancy, stitching, and structural integrity.
  - Additional tests for inflatable life jackets covering inflation systems and pressure retention.

By enforcing these standards, IS 6685:2009 ensures life jackets provide reliable and durable protection, meeting safety needs in critical water environments.