# IS 14434:1998 POLYCARBONATE MOULDING AND EXTRUSION MATERIALS- SPECIFICATION

The product mentioned in **IS 14434:1998** is **polycarbonate moulding and extrusion materials**, including homopolymers and copolymers, which are highly versatile **engineering thermoplastics**. Polycarbonate materials are used in various industries like **automobile, electronics, lighting**, and **medical applications** due to their mechanical strength, temperature resistance, optical clarity, and electrical insulation properties.

**Key elements of IS 14434 includes:**

***Mechanical Strength*:** High impact resistance, making the material virtually unbreakable in many applications.

***Temperature Resistance*:** The ability to withstand a wide temperature range, ensuring performance in diverse environments.

***Optical Clarity*:** Crucial for industries like lighting and electronics, where transparency is important.

***Electrical Insulation*:** Due to it's dielectric properties, Polycarbonate is suitable for electrical applications.

***Flammability Resistance*:** To meet the safety in electrical and electronic applications, polycarbonate must fulfil the specific flammability standards.

The standard provides a classification system based on important physical, mechanical, and thermal properties like **melt flow, specific gravity, flexural modulus**, and **impact strength**. These parameters ensure that materials meet required performance levels. It also specifies test methods to assess properties such as **volume resistivity, dielectric strength**, and **flammability.**

To maintain product quality and safety, the standard enforces the use of rigorous testing and sampling procedures, ensuring that materials conform to the expected performance criteria before being approved for use. This guarantees consumer confidence in the durability, safety, and efficiency of polycarbonate products across various applications.