



**Summary of IS 5175:2022: Fibre ropes - Polypropylene split film monofilament and multifilament (PP2) and polypropylene high tenacity multifilament (PP3) 3-, 4-, 8- and 12- strand ropes**

Polypropylene ropes are synthetic ropes made from polypropylene, a thermoplastic polymer known for its durability, lightweight nature, and resistance to various environmental factors. These ropes are popular in marine, industrial, agricultural, and recreational applications due to their buoyancy, resistance to chemicals, and affordability. Polypropylene ropes come in various types, including **monofilament**, **multifilament**, and composite, each suited to specific applications based on strength, flexibility, and durability needs.

Consumers expect polypropylene ropes to deliver high tensile strength, durability, and abrasion resistance for demanding applications. UV stabilization and weather resistance are essential for prolonged outdoor use, while effective knot-holding capability ensures secure performance, especially in marine settings. Chemical resistance is important for industrial and water-based environments, where ropes must withstand oils and acids without deterioration. The ropes' buoyancy makes them ideal for water applications, while flexibility and easy handling add convenience in everyday use. Additionally, consumers value bright, visible colors that resist fading from sun and water exposure, ensuring the ropes remain practical, durable, and reliable in various settings.

This Indian Standard, IS 5175:2022, is identical to ISO 1346:2021 and outlines the requirements for **polypropylene ropes** used for general purposes. It covers 3-strand, 4-strand, 8-strand, and 12-strand ropes made from different types of polypropylene filaments. This standard specifies designation system, the **linear density** and **minimum breaking strength** for different types of ropes and sizes. This standard also highlights the factors that can impact a rope's breaking strength, like knots, bends, and previous stress applications. At last, this standard also prescribes the marking requirements for the ropes and provides information on the BIS Certification Marking for products conforming to the standard.