

IS 15559:2004

This Indian Standard (IS 15559:2004) specifies requirements for polyester straps used in baling, closing, reinforcing, and bundling articles for shipment, unitizing, and palletizing. Polyester strapping is the most rigid option, offering the strongest plastic strapping, and is used as a viable alternative to steel in many industries. Polyester provides excellent retained tension on rigid loads and its excellent recovery properties help a load absorb impact without strap breakage.

Key features and advantages of polyester strapping over metal strips include:

- Lighter weight, reducing freight costs
- No sharp edges, making it safer and less damaging to loads
- Weather and UV resistant
- Does not rust or cause staining
- Maintains load-holding characteristics due to elastic memory
- Environmentally friendly and recyclable
- Produces minimal ash (0.03%) when incinerated

Key points included in the standard include:

- Two types based on strength: Type I (9-12.9 mm width) and Type II (13-25 mm width)
- Manufacturing requirements, including material quality and surface finish
- Physical properties like dimensions, breaking strength, and tolerances
- Mechanical properties including tensile strength, elongation, split resistance and camber
- Packing and marking guidelines
- Sampling and retesting procedures

Key manufacturing requirements to be met are:

- Made from Polyethylene-terephthalate (PET)
- Minimum intrinsic viscosity of 0.84 grade
- Must be free from defects like kinks, edge curvature, or cracks
- Specific dimensional tolerances for width and thickness
- Color as agreed between buyer and seller

It provides detailed tables for dimensions, physical properties, and testing requirements. The document emphasizes quality control through specific testing methods and acceptance criteria. Overall, it aims to ensure consistent quality and performance of polyester strapping for industrial use, while promoting safety and environmental considerations.