COMPENDIUM OF INDIAN STANDARDS

COIR AND COIR PRODUCTS

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INTRODUCTION

Coir is a versatile, eco-friendly, and sustainable natural fibre, often referred to as the "golden fibre" due to its strength, resilience, and wide-ranging applications. India, the world's largest producer and exporter of coir and coir products, showcases a rich heritage of craftsmanship and innovation through this humble yet powerful fibre "coir". The sectional committee responsible for formulation of standards for coir and coir products is TXD 25.

This compendium brings together all the key Indian Standards related to coir and coir products, including how they are made, how they should perform, and how to maintain them. It's meant to be a practical, go-to guide for anyone working with coir products, whether you're a manufacturer, designer, installer, or someone simply looking to make informed choices.

A. LIST OF PRODUCT STANDARDS ON COIR AND COIR PRODUCTS

1) IS 11060 : 2020 Specification for moulded rubberized coir cushioning

This standard specifies requirements and test methods for moulded rubberized coir products used in seats, backrests, and similar applications. It outlines performance criteria like indentation hardness, density, compression set, and ageing resistance.

2) IS 11420 (Part 1 to 9) : 2020 Specification for coir mats

This standard covers the specifications for various types of coir mats including corridor, door, gymnasia, loop, mesh, rope, and sinnet mats. It defines terminology, constructional details, dimensions, and test methods to ensure quality and performance. The mats must be made of coir yarns with specific runnage, mass, and structural requirements, including pile height and weave type.

3) IS 12503 (Part 1 to 6) : 2020 Coir – Mattings, mourzouks and carpets

This Indian Standard outlines the specifications for coir products, including mattings, mourzouks, and carpets. Specific requirements for different types of coir products, such as ribbed mattings, mourzouks, carpets, and cricket pitch mattings, are provided in separate parts.

4) IS 14596 : 2020 Coir products – 2-ply coir yarns spun by manual operation

This Indian Standard specifies the requirements for 2-ply coir yarns spun by manual operation. It stipulates norms for linear density, turns per meter, breaking load, moisture content, salt and sand content, and also includes requirements for colour and feel.

5) IS 15340 : 2019 Coir felt – Specification

This Indian Standard specifies the requirements and test methods for coir felts. It covers two grades of coir felt, each with seven varieties, based on their mass and thickness, ranging from 600

g/m^2 to 1200 g/m^2. It outlines criteria for impurities, mass per square meter, thickness, moisture content, chloride content, sulphate content, and pH value, along with detailed test procedures for each.

6) IS 17734 : 2022 PVC/Latex Tufted Coir Mats

This Indian Standard specifies the constructional particulars and performance requirements for PVC/Latex Tufted Coir Mats. These mats are manufactured by tufting natural coir yarn into a latex or PVC backing, which provides anti-slipping properties and ensures low fiber shedding and structural stability. The standard covers various requirements, including length, width, pile density, pile thickness, color fastness, tuft withdrawal force, and tearing strength.

7) IS 17739 : 2024 Raw Coir Pith

This Indian Standard specifies requirements for raw coir pith. The standard incorporates significant properties of coir pith and their test methods for determining the pH and electrical conductivity of coir pith. Coir pith, also known as coir dust, is a byproduct of coir fiber extraction and is widely used in agriculture and horticulture.

8) IS 19103 : 2025 Coir Pith Block

This Indian Standard specifies requirements for coir pith blocks. Coir pith, also known as coir dust, is a significant byproduct of coir fiber extraction, produced in double the quantity of the fiber itself. This standard aims to standardize and certify coir pith blocks of varying electrical conductivity (EC) and packaging dimensions for reliable use in agriculture and horticulture

9) IS 8391 (Part 1) : 2019 Rubberized coir sheets for cushioning – Specification Part 1 Curled

This Indian Standard specifies requirements for rubberized coir sheets used in cushioning, specifically focusing on the curled variety. It covers aspects relevant to the performance and characteristics of rubberized coir sheets for cushioning applications.

10) IS 8391 (Part 2) : 2020 Rubberized coir sheets for cushioning – Specification Part 2 Needle felt

This Indian Standard specifies requirements for rubberized coir sheets used in cushioning, specifically focusing on the needle felt variety.it addresses the performance and characteristics of rubberized coir sheets for cushioning applications.

11) IS 8391 (Part 3) : 2019 Rubberized coir sheets for cushioning – Specification Part 3 Sandwiched

This Indian Standard specifies requirements for sandwiched rubberized coir sheets for cushioning applications. Sandwiched Rubberized Coir (SRC) sheets are cushioning products made by placing a suitable polyurethane and/or latex foam rubber sheet between two rubberized coir sheets. This design enhances their cushioning properties.

12) IS 898 : 2020 Specification for retted coir fibre

This Indian Standard specifies requirements for retted coir fibre. Retted coir fibre is produced through a retting process, which is essential for extracting fibers from coconut husks.

13) IS 9308 (Part 1) : 2020 Specification for mechanically extracted coir fibres Part 1 Bristle coir fibre

This Indian Standard specifies requirements for mechanically extracted coir fibers, specifically focusing on Bristle Coir Fibre. This standard addresses the characteristics and quality of bristle coir fiber obtained through mechanical extraction processes.

14) IS 9308 (Part 2) : 2020 Specification for mechanically extracted coir fibres Part 2 Mattress coir fibre

This Indian Standard specifies requirements for mechanically extracted coir fibers, specifically focusing on Mattress Coir Fibre. This standard addresses the characteristics and quality of mattress coir fiber obtained through mechanical extraction processes.

15) IS 9308 (Part 3) : 2020 Specification for mechanically extracted coir fibres Part 3 Decorticated coir fibre

This Indian Standard specifies requirements for mechanically extracted coir fibers, specifically focusing on Decorticated Coir Fibre. This standard addresses the characteristics and quality of decorticated coir fiber obtained through mechanical extraction processes.

16) IS 9308 (Part 4) : 2019 Mechanically extracted coir fibres – Specification Part 4 Machine twisted curled coir fibres

This Indian Standard specifies requirements for mechanically extracted coir fibers, specifically focusing on machine twisted curled coir fibres. Machine-twisted curled coir fiber is a primary raw material used in manufacturing consumer goods like rubberized coir sheets for cushioning and molded rubberized coir cushioning.

B. LIST OF TEST METHOD STANDARDS FOR COIR AND COIR PRODUCTS

1) IS 4202: 2022 Method for Determination of Chloride Content of Textile Materials

This Indian Standard outlines methods for determining the chloride content in textile materials. The standard provides procedures for preparing aqueous extracts of textile materials and then determining chloride content using gravimetric, volumetric, or potentiometric titration methods.

2) IS 4203:2022 Method for Determination of Sulphate Content in Textile Materials

This Indian Standard sets out methods for determining the sulphate content in textile materials. The standard describes procedures for preparing aqueous extracts of textile materials and subsequently determining sulphate content using either gravimetric or volumetric methods. The presence of excessive water-soluble substances, such as sulphates, in textile materials can have detrimental effects on the fibrous material and its performance.

3) IS 2711: 1979 Specification for Direct Reading *p*H Meters

This Indian Standard specifies requirements for direct reading pH meters used in laboratories, covering both mains and battery-operated instruments. The standard defines key terminology related to pH meters, such as pH value, range, scale division, digital pH meter, and various error types. It also classifies instruments based on their accuracy and specifies that they should be calibrated in pH units and millivolts, covering at least 10 pH units in the 0-14 pH range

4) IS 6359: 2023 Method for Conditioning of Textiles

This Indian Standard outlines the method for conditioning all textile materials. For tropical countries like India, a conditioning temperature of 27°C ± 2°C is specified, differing from the 20°C ± 2°C in international standards, which is often impractical to maintain in India.

5) IS 6489 (Part 2) :2011 Textiles – Tear Properties of Fabrics Part 2 Determination of Tear Force of Trouser Shaped Test Specimens (Single Tear Method)

This Indian Standard describes a single-tear method, known as the trouser test, for determining the tear force of fabrics. This method is applicable to woven textile fabrics and some nonwovens, but generally not to knitted or woven elastic fabrics, or highly anisotropic fabrics where tear transfer may occur. The test measures the force required to propagate a previously started single tear when the force is applied parallel to the cut, causing the fabric to tear in the direction of the applied force.