

TECHNICAL TEXTILES – PART II

REF: TT/ NOV 2021/ WK 4

PackTech

PackTech or Packaging textiles for packaging is one of the most important areas in technical textile. It includes heavyweight woven fabrics, flexible Intermediate bulk containers and wrappings fabrics. It also includes lightweight nonwovens used as durable papers, tea bags etc. The lighter weight packaging materials like wet-laid, spun bonded nonwovens are used in the food industry, medicine packaging, and electronic parts. Packaging textiles have also intelligent systems which interact with their content and inform the consumer about spoilage risks or products non-conformity.

Different packaging textile materials are:

- a) The **heavyweight woven fabrics** are used for bags, sacks etc. Woven sacks are manufactured from Polypropylene (PP)/High density Polyethylene (HDPE) materials. They have the advantages such as higher strength, light weight, moisture proof, durable, cost effective, reusable and sustainable. Polyolefin (HDP
- b) E/PP) woven sacks are versatile packing materials used in the packing of cement, fertilizers, thermo plastic raw materials, food grains, etc.
- c) The high strength of the synthetic materials along with modern material handling techniques introduced **Flexible Intermediate Bulk Containers** or **FIBC** for more efficient handling, storage, and distribution of powdered and granular materials. Flexible Intermediate Bulk Containers (FIBC) is similar to the HDPE/PP bags but they are of larger size. FIBCs are one of the most cost effective and ideal types of packaging for shipping and storing dry bulk products. They can be produced from either tubular or flat polypropylene (PP) woven fabrics. There are three types of FIBC bags - Panel Type, Circular woven, Square Bags. It is used in bulk packaging of petrochemicals, polyester chips, minerals, agro-products such as wheat, rice, starch, lactose and sugar, chemicals, such as carbon black, dyes and intermediates and fertilizers etc.
- d) **Leno bags** are excellent for packing and preserving material for vegetables and fruits. Leno bags have the advantages like superior aesthetics, excellent mechanical properties, chemically Inert, ease handling reusable and recyclable and cost effective.
- e) **Wrapping fabric** is made out of HDPE/PP, cotton canvas, etc. Non-laminated PP/HDPE woven fabric is mainly used for wrapping of paper rolls, paper bundles, steel coils, tyres, yarn cones etc. Natural woven laminated sheets; those are see- through fabric and are mainly used as a wrapping material.



- f) **Tea bags** consist of a filter paper pouch with a thread, which holds the tea powder and a tag. Tea bag filter paper is made with a blend of wood and vegetable fibers. The vegetable fiber is bleached pulp Abaca. Heat-sealed tea bag paper usually has a heat-sealable thermoplastic such as PVC or polypropylene, as a component fiber.

ABACA FIBER

Abaca is a leaf fiber, composed of long and slim cells. Lignin content of it is 15%. Abaca is used for its high mechanical strength, resistance to saltwater damage, and long fiber length.

- g) **Soft luggage** is made out of woven fabrics like nylon and polyester. It comprises of uprights, totes, and duffle and sky bags. The soft luggage is very popular because they are light and flexible. Soft luggage also includes handbags, military backpacks, athletic backpacks, wallets, briefcases and other soft sided luggage items.



Fig 1.1 Packaging Textiles
Ref: beaulieutechnicaltextiles.com

References:

1. <https://www.investindia.gov.in/>
2. <http://texmin.nic.in/>
3. <http://www.ittaindia.org/>
4. <https://www.researchgate.net/>

.....To be continued.....

UNSCRAMBLE THE JUMBLE WORDS
XELFBIEL
ARWPNIGP
ROPLOYEENLYP
FUDFEL

Last week`s Answers: 1) MANUFACTRED 2) NOISE 3) EARTH 4) DOSAGE

Wishing you a great week ahead!

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