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RESEARCH ARTICLE

TEXTILES FOR COLOURFUL HOME AND ITS FUTURE PROSPECTS

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ABSTRACT

Home textile is an important segment of technical textiles, which covers soft and hard sectors depending on the unique characteristic of the product. New design concept and innovation are the areas to be explored to impart functional features, which may sometimes be derived from apparel technology. India is globally recognized and appreciated for its wide variety and exquisite designs in home textiles & furnishing fabrics. The country is on the verge of a big boom in the affordable housing sector and there is good growth in employment opportunities, especially in the services sector and hence high disposable incomes in the hands of young consumers. A combined result of these factors have seen the demand for home textile products growing by a healthy 30-40% per annum. This paper highlights the various products like filter fabrics, carpet backing cloth, soft toys, wall coverings, floor coverings, window blinds, furniture fabrics, mosquito nets etc., and their future prospects in the technical textiles sector.

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INTRODUCTION

Home textiles are also called as domestic textiles or hometex. Hometech with 'armchair' as symbol includes innovative developments in the manufacture of furniture, upholstery, floor Coverings, interior furnishing and carpets such as anti-static floor coverings and outdoor textiles with integral mite protection. They are made of both natural and synthetic fibers and are mostly fire retardant fabrics whose properties are derived either by using fire retardant fibers such as modacrylic fiber or by coating the fabrics with fire retardant additives such as bromide of phosphorus compounds (<http://www.teonline.com/knowledge-centre/study-technical-textiles.html>). These are used in making of many home furnishing fabric including carpet backings, curtains, floor and wall coverings, etc. In the contract market such as for large area buildings, ships, caravans, busses, etc fire retardant materials are used (http://en.wikipedia.org/wiki/Technical_textile).

End uses of Hometech

- Interior decoration,
- Window blinds
- Carpet backing cloths(jute and synthetic)

- Wadding and Fiberfill(pillows)
- Filter fabrics for vacuum cleaner
- Furniture fabrics,
- Mattresses & pillow components
- Mosquito nets,
- Nonwoven wipes
- Stuffed toys,
- Curtain tapes
- Carpeting,
- HVAC filters,
- cushion materials,
- curtains, fireproofing,
- floor and wall coverings,
- Textile reinforced structures/fitings

(<http://compositesuk.co.uk/system/files/documents/Technical%20Textiles.pdf>; <http://www.bch.in/geotextiles.html#home-textiles>).

Fiberfil

Fiberfil refers to polyester staple fibres used as filling for pillows, decorative pillows, cushions, quilts & comforters, mattresses, sleeping bags, furniture cushions, furniture backs, insulated garments and soft toys. Traditionally cotton has been used as a filling material in India. With rapid development in synthetic fiber production technology, special synthetic fibers (like polyester) have been developed as an alternative to cotton

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for filling purpose (<http://www.technicaltextile.net/hometech-textiles/fiberfill/index.aspx>).

Carpet Backing Cloth

Carpet Backing Cloth (CBC) is used as the backing material for both woven and tufted carpets. CBC is generally classified into two categories:

- Primary Carpet backing: The base fabric on which pile yarns are tufted and anchored to make a carpet
- Secondary Carpet backing: Fabric bonded on the backside of the carpet forming an underlay (<http://www.technicaltextile.net/hometech-textiles/carpet-backing-cloths/index.aspx>).

Stuffed Toys

Stuffed toys, also referred to as plush toys and soft toys, are made up of soft knitted fabrics stuffed with filling material. Stuffed toys are popular for a variety of reasons – as toys for kids, as gifts, as decoration in homes. Stuffed toys are entirely textile material. The outer fabric or skin of stuffed toys is made of fur, fleece, polyester felt, pile, acrylic plush fabrics, etc. The skin is stuffed (filling) with a variety of materials such as polyester staple Fiberfil, foam, cloth scrap, paper foam or cotton (<http://www.technicaltextile.net/hometech-textiles/stuffed-toys/index.aspx>).

Window Blinds

A window blind is a window covering composed of long strips of fabric or rigid material. The desired functional performance include light and glare control, desired outside view, ease in handling and maintenance, acoustic performance, etc. It is made up of polyester, viscose, cotton, acrylic and blended yarns. There are also other varieties including glass fiber fabrics, black-outs, Jacquards, etc. Different types of coatings are done on the fabric for blinds to make it water resistant, dust repellent or stain free. The coating is also done to prevent the fading of color due to excess exposure to sunlight (<http://www.technicaltextile.net/hometech-textiles/window-blinds/index.aspx>).

HVAC Filters

HVAC stands for Heating, Ventilating, and Air Conditioning. The HVAC systems are used in Industries, commercial and residential buildings where humidity and temperature need to be closely regulated. The filtration systems in general can be classified as Liquid -Solid separation (e.g. vacuum and pressure filters), Air-Gas separation (e.g. activated carbon filters) and Air-Solid separation (i.e. filters that remove particulate matter from air). HVAC filters belong to the category of air filtration products. HVAC filters are used in split and window type air conditioners as well as centralized air conditioning. The major filter media used in HVAC filters are nonwoven and made of polyester, polypropylene and glass fiber (www.technicaltextile.net/hometech-textiles/hvac-filters/index.aspx).

Filter Fabrics for Vacuum Cleaners

Vacuum cleaners have a filter to remove the dust from the exhaust air. The dust is collected in a paper bag which can be

disposed off. Some of the vacuum cleaners also use HEPA (High Efficiency Particulate Air) filters. The use of vacuum cleaners is mainly seen in the urban areas. The major filter media are nonwoven, made of polyester, polypropylene and glass fiber (<http://www.technicaltextile.net/hometech-textiles/filter-fabrics-for-vacuum-cleaner/index.aspx>).

Mosquito Nets

The mosquito net is an essential item used all over the country for protection from mosquitoes; therefore the market of the item exists throughout the year. As other precautions in practice like mosquito repellent mats, ointment and coils have various side effects; people prefer the use of mosquito nets therefore the demand is increasing day by day. Nylon net constitutes around 96% of the raw material cost of the mosquito net (<http://www.technicaltextile.net/hometech-textiles/mosquito-nets/index.aspx>).

Mattresses and Pillows

A mattress is a mat or pad usually placed on top of a bed. They can be broadly classified as

- **Foam mattresses, Coir mattresses, Spring mattresses.**

Mattresses are made of a filling material like coir, foam etc which provides support to the body. Traditional Indian mattresses are thick quilts made up of cotton stuffing. The protective fabric cover which encases the mattress is called ticking. Ticking fabric holds the filling material in place. It is usually made of cotton and comes in a wide variety of colors and styles. The market for mattresses and pillows can be broken down into three segments as households, hotels and hospitals (www.indiamart.com/glorious-retail/home-textiles.html).

Non woven wipes

A wipe is a small piece of cloth used for the purpose of cleansing or disinfecting. Wipes could be woven, knitted or nonwoven. Nonwoven wipes have recently gained popularity on account of their excellent absorption and softness. Non woven wipes are available in variety of sizes ranging from 2 X 5 square cm to 30 X 40 square cm. Majority of nonwoven wipes are manufactured by Spunlace technology. Viscose is the preferred fiber for wipes on account of its high absorbency coupled with softness. Wipes are also manufactured using other synthetic fibers as polypropylene, polyester, etc (<http://www.technicaltextile.net/hometech-textiles/nonwoven-wipes/index.aspx>).

Furniture Fabrics

Furniture Fabrics are mainly used in furniture made for seating purposes. Indian Furniture industry can be segmented as Home furniture, Office furniture and Contract furniture (majorly the hospitality segment). Hair, fiber, flock, foam rubber, and kapok are used for padding in modern upholstery whereas woven fabrics, plastics, leather and synthetic leather serve as coverings. Woven fabrics including flock and velvet are the most widely used furnishing fabrics in furniture.

Jacquard and Shanil have also gained customer preference as these fabrics are dust resistant. Artificial leather is another very widely used material for furniture. Furnishing fabrics are used in a variety of applications like floor/wall coverings, rugs, furniture, etc.

Raw Material used: Polyester, viscose, cotton, acrylic, polyester, polyester cotton, nylon (polyamide 6/6, 6) etc. are used for making flock fabrics of various kinds (<http://www.technicaltextile.net/hometech-textiles/furniture-fabrics/index.aspx>).

Floor and Wall Coverings

Floor & Wall covering items can be classified as following:

- PVC flooring & Printed PVC flooring
- Non-woven carpets
- Woollen carpets
- Carpets / floor coverings of polypropylene, polyester, etc (<http://www.technicaltextile.net/hometech-textiles/wall-coverings/index.aspx>)

Floor covering is a term to generically describe any finish material applied over a floor structure to provide a walking surface. Floor coverings have been mostly dominated by wool, polypropylene and acrylic carpets. But, as consumers began to look for affordable carpets that were easy to care and maintain at home, the trends started shifting towards polyester (<http://en.wikipedia.org/wiki/Flooring>).

Developments in home textiles

There have been a number of significant developments in home textiles over recent years. Manufacturers have successfully adapted performance apparel technologies for use in home textile products. For example, bed sheets are being made from Coolmax and Thermolite fabrics. Coolmax fabric incorporates a moisture management technology and has traditionally been used in active performance wear. Thermolite is a lightweight insulation material which was originally designed for outdoor performance apparel. Home textiles are also being made from various functional materials, including Lycra stretch fabric, thermally adaptive bedding, environmentally-friendly textiles, anti-microbial fabrics, stain protective treatments, flame retardant materials and fragrance encapsulating technologies (http://www.researchandmarkets.com/reports/363756/developments_in_home_textiles).

Conclusion

Home textiles sector in Indian Textile Industry has a favourable future in the international markets. As per today's trend, manufacturers have realised that people are getting more and more attracted towards decorating their house and office space with all those latest, functional and trendy interior materials and fabrics. In today's competitive world, in order to attract the customer it is very important to be different from other and for this they must think beyond colour, design and texture. New fibres could be the best solution to create new set of customers and for this it is necessary to understand the function and application of these new fibres. Also greater awareness of the triggers of asthma and allergies is fuelling demand for new anti-microbial home textiles.

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