PROSPECTS FOR THE TYPES OF FABRICS OBTAINED FROM TWISTED YARN

Dilshodbek Olimjonov
Researcher, Namangan Institute of Engineering and Technology, 160160, Namangan, Uzbekistan
E-mail:olimjonovdilshodbek3@gmail. com

Alijon Yusupov
Doctoral Student, Namangan Institute of Engineering and Technology, 160160, Namangan, Uzbekistan
E-mail:*alijonyusupov533@gmail. com*

Muslima Juraeva
Student, Namangan Institute of Engineering and Technology, 160160, Namangan, Uzbekistan
E-mail:muslimajurayeva020@gmail. com

Abstract

The Ministry of Investment and Foreign Trade of the Republic of Uzbekistan together with the Ministry of Foreign Affairs, the Association of Textile Industry of Uzbekistan organizes international exhibitions of textile and fashion industry in Uzbekistan at least once a year, including textile events in the world calendar. Agreements with the European Union, Turkey, Korea, China and other countries will include the reduction of customs duties on national textile products and the simplification of regulatory measures.

Association of Textile Industry together with the National Agency for Project Management under the President of the Republic of Uzbekistan within three months to develop and launch a single information portal for enterprises of the textile and garment industry (here in after - the portal) Announcing the list of tenders (competitions), exhibitions and fairs of the industry, including foreign exhibitions and fairs, export of textile and garment products to small businesses distance learning for the full process of production, access to detailed reports on the analysis of imports and exports of textile and garment industry products around the world,Location of the "Navigator measures of state support of enterprises of the textile and garment industry", the location of manufacturers of textile and garment industry and suppliers of services, materials and raw materials [1,2].

There are many descriptions of promising fabrics, which are also called "fabric of the future". In a number of sources, this type of textile was originally referred to as "smart fabrics". Fabrics added to the previous traditional function are called by this name. Over the years, the development of science and technology and, most importantly, the expansion of the use of it by mankind has led to a slight decline in the reputation of the name [3].

Promising fabrics were introduced in the middle of the last century, mainly in aerospace, in the study of the underwater world, in the study of extremely difficult natural conditions. The development of the military and the creation of various dangerous weapons have also led to the development of these fabrics. The assortment of clothes is classified according to groups, and they are approved as a class number 85, ie 85-clothes, 851-outerwear, 852-suit, 853-underwear, shirt, 854-hat, 855-manufacture and special work clothes, 856-technique sewing, 857-special sewing, 858-special sewing and others [4].

Studies, literary sources and the results of research show that promising fabrics are made in non-traditional ways and are used mainly as a preservative.

A second look can also be called continuous. According to historical sources, cotton, silk and wool fiber materials have a history of about 4,000 years. Natural fiber fabrics have also always been valued for their performance properties, level of human usefulness and universality. Their use can increase the human population of the globe, reducing the amount of irrigated land. Although the above fabrics are made with multi-stage, complex technologies, their destruction is low. For this reason, we consider it appropriate to focus on promising fabrics based on natural products [5].

The production of natural feather fabric from birds is developing. For example, in Russia and China, the profitability of poultry is high, and in order to introduce waste-free technology, this industry is giving rise to a new look, as well as technologies and assortments.

Membranes are ultra-thin films made of polymeric material and thus created, which have a very high resistance to the ingress of liquid water, but allow the passage of water vapor. The thickness of a normal membrane is only 10 micrometers and is therefore laminated with conventional textile fabrics to provide the required mechanical strength. They are of two types, microporous and hydrophilic [6,7].

Microporous membrane The first and probably best-known microporous membrane, developed and introduced by W. Gore in 1976, is known as Gore-Tex, a polymer of polytetrafluoroethylene (PTFE) polymer with 1. 4 billion tiny

holes per square meter. thin film. Much smaller than a raindrop (2-3 micrometers compared to 100 micrometers) is much larger than a molecule of water vapor. Other manufacturers obtain this fabric by making similar curtains based on micro polyvinylidene fluoride (PVDF) casting directly onto the fabric [8].

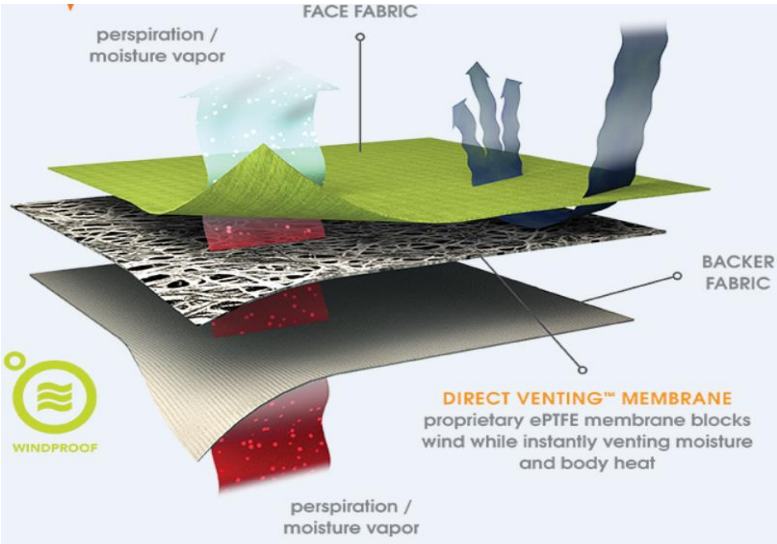

Figure 1. A thin film of polytetrafluoroethylene (PTFE) polymer

The hydrophobic properties of the polymer and the small size of the pores require very high pressure to allow water to enter. Various contaminants of the membrane with body oils, particulate contaminants, pesticide residues, insect repellents, sunburned lotions, salt and residual detergents and surfactants used for cleaning reduce the waterproofing and permeability of the membrane.

Hydrophilic membranes are very thin films of chemically modified polyester or polyurethane that have no pores, so they are sometimes referred to as non-poromeric. Water vapor from sweat can be released in relatively large quantities through the membrane [9]. Polyester or polyurethane polymer is modified by the addition of poly (ethylene oxide) 2 up to 40% by weight. Poly (ethylene oxide) forms the hydrophilic part of the membrane, forming amorphous regions of the polyurethane polymer system.

Classic 1st layer. It has a low energy proximity to water molecules, which is necessary for the rapid diffusion of water vapor. These amorphous regions act as intermolecular “holes” that allow water vapor molecules to pass through, but prevent the ingress of liquid water due to the rigid nature of the membrane [10].

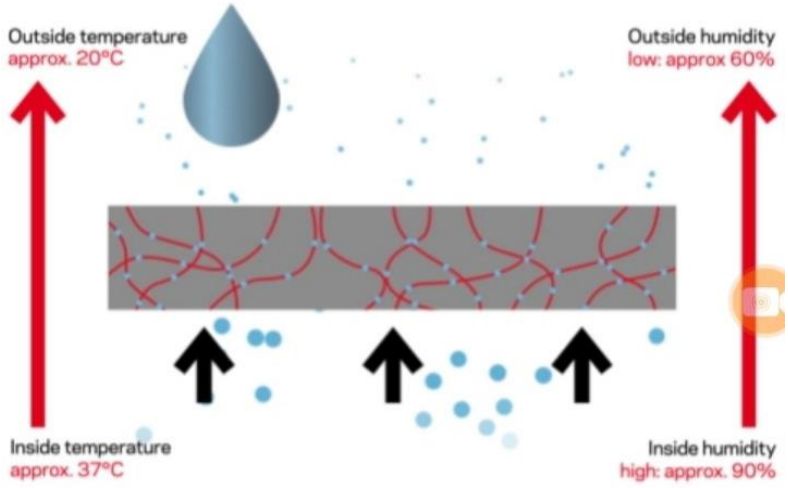

Figure 2. Distribution of water vapor.

Classic 2nd layer. It is soft, versatile, weatherproof and good for end use such as hiking, streetwear, golf and skiing. It is produced by laminating a nylon or polyester-faced fabric to a Gore-Tex membrane and then hanging a net curtain on the inside of the laminate.

Classic 3-layer. Designed for high durability in rough use applications in severe weather conditions such as high climbing [11,12]. Formed by laminating a Gore-Tex membrane fabric (usually nylon), the inner protective test curtain is then laminated to the other side of the membrane, providing good durability.

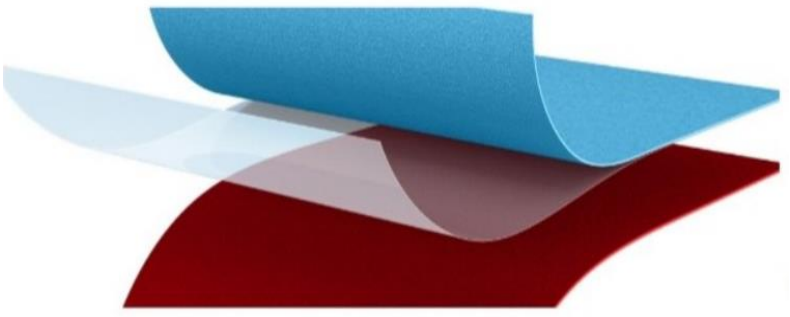

Figure 3. Nylon laminating location.

HyVent (North Face). Manufactured as an innovative option for complete weather protection, HyVent is a waterproof and breathable polyurethane-based membrane. Although slightly less breathable than Gore-Tex laminates, it can be considered a very waterproof and reliable protective outer layer.

HPX technology. The fabric allows the moisture vapors inside the suit to breathe, while also stopping the ingress of sea or rainwater. This is achieved by having

microscopic holes in the membrane that are large enough to release water vapor, but very small for water droplets to enter. Included in the HPX jacket and tuxedo is a Stretch HPX fabric that is specifically for the Musto.

It serves to increase the range of promising garments and the requirements for them in the manufacture of fabrics that serve the person well. A thin film of polytetrafluoroethylene (PTFE) polymer, used worldwide,Water vapor distribution, Nylon laminate placementpromising types of fabrics, information on the range of these fabrics.

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