

DETERMINATION OF PHYSICAL-MECHANICAL PROPERTIES OF NEWLY PRODUCED TOWEL FABRICS AND THEIR COMPARATIVE ANALYSIS

Orazbayeva Rayxan Izmuratovna

Turmanov Imamaddin

(PhD) Associate Professor, Karakalpak State University named after Berdakh, 230112
Karakalpakstan, Uzbekistan, e-mail: orazbayevarayxan2@gmail.com

Anotation: These created patterns are distinguished by their non-repeatability. Summing up the national ornaments and colors used from these compositions, the existing created compositions can be recommended for use in the design of feathered toweling fabrics, taking into account the production possibilities of the feathered toweling fabrics.

Key words: physico-mechanical, tanda, argoq, shearing, towel, surface density, wafer, fabric, surface density.

Anonatsiya: Yaratilgan ushbu na'munalar o'zining takrorlanmasligi bilan ajralib turadi. Ushbu kompozitsiyalardan foydalanilgan milliy ornamentlar hamda ishlatilgan ranglarda xulosa qilib aytganda, mavjud yaratilgan kompozitsiyalarni tukli sochiqbop to'qimalarning ishlab chiqarish imkoniyatlarini hisobga olgan holda tukli sochiqbop to'qimalarga dizayn berishda foydalanish uchun tavsiya etish mumkin.

Kalit so'zlar: fizik-mexanik, tanda, argoq, o'rilish, sochiqbop, yuza zichlik, vafel, to'qima, yuza zichlik.

Аннотация: Данные созданные узоры отличаются своей неповторяемостью. Обобщая национальные орнаменты и использованную цветовую гамму этих композиций, существующие созданные композиции можно рекомендовать к использованию в дизайне пернатых махровых полотен с учетом производственных возможностей пернатых махровых тканей.

Ключевые слова: физико-механические, tanda, аргок, сдвиг, полотенце, поверхностная плотность, пластина, ткань, поверхностная плотность.

A new fabric was produced as an experiment on the existing modern equipment at the enterprise "Namangan fluffy towels" LLC, Namangan region . Physico-mechanical properties of produced sample tissues were determined. The physical-mechanical properties of these samples were studied in the "CENTEXUZ" educational and testing laboratory equipped with modern, high-precision equipment available at the Tashkent Institute of Textiles and Light Industry and the testing laboratories of the "Uzbek-Turkish Test Center" JV. These indicators are presented in table 1.

Table 1.
Physical-mechanical properties of tissues

No	Indicators name	Waffle mowed tissue of example, of experience analytical results .
1	Surface density, g / m ²	270
2	10 cm in threads number of :	

	Body according to	220
	Vodka according to	220
3	Interruption power, N	660
	Body according to	299
	Vodka according to	299
4	Penetration after washing, %	-4,5
	Body according to	-7,5
	Vodka according to	-7,5
5	Capillarity, mm (for 30 min)	30
6	Air conductivity,	50,87

From the analysis of the table, we can see that the obtained fabric is made of cotton thread with 27x2 tex on the body and 39 tex on the warp. Surface density is 270 g/m², tensile strength is 660 N on the body, 299 N on the back. After washing, penetration by weight – 4,5%, by alcohol - is equal to 7,5%. Capillarity (for 30 min) 30 mm. Air permeability – 50,87%.

The basis of textile products is its properties, which serve as the main structure in the use and study of the product. When testing a textile product, it determines the experimental quantity or quality of the object. By testing the fabric, it is possible to conduct research on them, control the property of the fabric, in short, control the quality of the fabric (Table 2).

Table 2.

Comparison table of physical-mechanical properties of existing and new wafer textures

No	Indicator name	Waffle texture available sample of experience analytical results .	New Waffle fabric sample of experience analytical results .	The difference
1	Surface density , g/m ²	206	270	64
2	10 cm in threads number of :			
	Body according to	200	220	20
	Vodka according to	200	220	20
3	Interruption power , N			
	Body according to	480	660	180
	Vodka according to	290	300	10
4	From washing after penetration , %			
	Body according to	0	4,5	4,5
	Vodka according to	2	7,5	5,5
5	Capillarity , mm (30 min for)	12	30	18
6	Air conductivity ,	78	50	-28

GOST 11027-2014 for all types of terry fabrics, as mentioned above requirements) are controlled through The fact that each created product meets the requirements of GOST determines the quality indicator of this fabric.

A comparison of our manufactured and existing wafer molds according to GOST requirements is presented in Table 3.

Comparison table of existing and newly created wafer textures with GOST requirements

Table 3

No	Indicator name	Available Waffle tissue example	New Waffle fabric example	GOST indicators
1	Surface density , g/m^2	206	270	Up to -5%, excess is allowed
2	10 cm in threads number of :			
	Body according to	200	220	$\pm 3\%$
	Vodka according to	200	220	$\pm 4\%$
3	Interruption power , N			
	Body according to	480	660	350
	Vodka according to	290	300	210
4	Capillarity , mm (30 min for)	12	30	10
5	Air conductivity ,	78	50	80

A towel is a tissue that has the property of liquid absorption. Towels are mainly waffle and ring-spun. In order to absorb moisture well, towels are woven from low-stretch threads. Designed for drying or wiping liquid. It should be resistant to friction, have good wear properties, be braided on the basis of different cuts, and have a high level of appearance.

Received results based on conclusion to be done if:

According to the results of the experiment, the surface density of the fabric (400"with the help of "GX-equipment") is $270 g/m^2$;

Air permeability (using AR-360 QM equipment) – $50.87 cm^3/cm^2 \cdot sec$;

The breaking strength of the fabric (Statimat) was found to be equal to -660N in the trunk, and 300N in the back .

The created special fabric is produced from 100% cotton yarns and meets the required amount in terms of strength, water permeability, air permeability, and breaking strength .

conclusion:

1. In order to create new types of terry-like pile fabrics, new types of pile fabrics were created by increasing the pile strength without changing the density of the ground, pile and weft.

2. The assortment has been expanded by using complex weaves to create artistic decorations in the fabric using feather and waffle weaves.

3. These created samples are distinguished by their uniqueness. In conclusion, considering the national ornaments used in these compositions and the colors used, the existing created

compositions can be recommended for use in designing fluffy towel-like fabrics, taking into account the production capabilities of fluffy towel-like fabrics.

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