

China Product Standard GB/T 21295-2024 Requirements of Physical and Chemical Performance of Garments Published

GB/T 21295-2024 Requirements of Physical and Chemical Performance of Garments has been published. It is applicable to quality requirements of garments mainly made of woven fabrics, except cases when other China product standards have own requirements defined. It will be effective on October 1, 2024, replacing the 2014 edition. In comparison to GB/T 21295-2014, major technical parameter changes are the following:

New additions in 2024 version:

1. New requirements and limits

Item	Requirement
Colorfastness	
Colorfastness to dye transfer in storage	Color Change & Color Staining : infant products ≥ 4 Others $\geq 3-4$
Colorfastness to staining of washing solution	≥ 3
Colorfastness to light yellowing	Color Change ≥ 4
Colorfastness to ozone	Color Change $\geq 3-4$
Durability	
Bursting strength	The knitted fabric on the finished product shall not be less than 250 N. Products with hollowed out (including gauze, mesh, etc.), drawn-thread, burnt-out and fabrics containing elastic fibers or ribbed fabrics will not be assessed
Damp heat aging performance	Color Change ≥ 4 Other: No obvious abnormalities
Functional performance	
Thermal insulation	Insulation rate : Garment with filling $\geq 68\%$ Other garments $\geq 30\%$
Flammability	The length of damage should not exceed 150 mm, the ignition time should not exceed 5 seconds, and the smoldering time should not exceed 5 seconds, without melting or dripping.
Iron free performance	After washing and drying 5 times, the appearance flatness after washing and drying should not be lower than Grade 3.5. The appearance flatness of the seam after washing and drying should not be lower than Grade 3. The appearance of the pleats after washing and drying should not be lower than Grade 3.
Anti wrinkle performance	\geq Grade 3
Antistatic performance	$\leq 0.60 \mu\text{C}/\text{piece}$
Anti itching performance	≤ 320
Anti-mosquitoes performance	$\geq 30\%$
Anti-mould performance	Comply with Grade 0 or Grade 1
Anti-mites performance	$\geq 60\%$
Antibacterial performance	Comply with Table 14 of the standard
Deodorizing performance	Comply with Table 15 of the standard
Cool feeling in contact instant	$\geq 0.15 \text{ J}/(\text{cm}^2 \cdot \text{s})$
Anti electromagnetic radiation performance (blockage)	$\geq 5 \text{ dB}$

Item	Requirement
Safety performance	
Total cadmium	Coating and printing/dyeing parts of infant clothing ≤ 100 mg/kg Coatings and printing/dyeing parts of clothing for adults and children under 14 years old ≤ 1000 mg/kg
Attachment tensile strength	Small parts on infant products should comply with Table 18
Attachment sharpness	No accessible sharp point and sharp edge on the accessories
Drawstring safety	The drawstring of infant and children textile products should comply with GB 31701 and GB/T 22705
Residual metal needle	No residual metal needle
Nickel release	≤0.5 μg/(cm ² •week)
Allergenic dyestuffs content	≤50 mg/kg
Carcinogenic dyestuffs content	≤50 mg/kg
SCCP	≤1500 mg/kg
Permethrin content	≤ claimed value
PFOS and PFOA	Total <1.0 μg/m ²
PFOA	≤0.025 mg/kg
Chlorinated toluene	each <1.0 mg/kg
PAHs	each <1.0 mg/kg
Solvent residue	each <3000 mg/kg
Vinyl chloride monomer	≤5.0 mg/kg

- Added substance lists of allergenic dyes, carcinogenic dyes, SCCP, permethrin content, PFOS and PFOA, Chlorinated toluene, PAHs, Solvent residue and Vinyl chloride monomer (see Annex B, Annex C, Annex E~Annex L).

Removed requirements in 2024 version:

- Removed specific terms and definitions.
- Removed the requirements for appearance flatness after washing and seam appearance flatness after washing.

Modified requirements in 2024 version:

- Modified the requirements of colorfastness to wet rubbing, colorfastness to light and colorfastness to hot pressing.

Item	2014 version	2024 version
Colorfastness to wet rubbing	Infant products ≥3 Others ≥2-3	Infant products ≥3 (dark 2-3) Others ≥2-3 (non children products dark 2)
Colorfastness to light	≥3 (dark 4)	≥3
Colorfastness to hot pressing	Infant products ≥3-4 Others ≥3	Infant products ≥4 Others ≥3-4

- Modified the requirements of pilling, adhesive interlining peeling strength and abrasion resistance.

Item	2014 version	2024 version
Pilling	≥Grade 3	≥Grade 3. Not applicable for raised, flocked, sanded, burn-out and clipped fabric.
Adhesive interlining peeling strength	≥6 N. Only applicable for the collar and body of the top, and not applicable for the peeling of composite, coating and carded woolen fabrics. No need test if the adhesive interlining cannot be peeled off.	≥6 N. The testing area should include at least the collar and body of the top. No need test if the adhesive interlining is velvet and carded woolen fabric. No need test if the adhesive interlining, composite fabric and spray coated fabric cannot be peeled off.
Abrasion resistance	a. Top ≥10000 cycles b. Bottom ≥15000 cycles	a. Top shell ≥10000 cycles b. Bottom shell ≥15000 cycles Jumpsuits and dresses will be assessed separately based on top and bottom.

3. Modified the note of dimensional stability, the requirements of spirality after washing, appearance after washing.

Item	2014 version	2024 version
Dimensional stability	a. Only test to the products mark as washable/ drycleaned in use instruction. b. Collar section only assesses garment with close collar.	a. No need to assess finished product that marked as non-washable/ non drycleaned in the use instruction. Pleated products do not assess the dimensional stability in the pleating direction, and elastic products containing elastic fibers in the weft direction do not assess the dimensional stability in the weft direction. b. Collar section only assesses garment with close collar. c. Not applicable for elastic waist.
Spirality after washing	≤3.0%	Top ≤5.0% Bottom≤3.0%
Appearance after washing	Comply with Table 13 of the standard	Comply with Table 10 of the standard

4. Modified the requirements of moisture absorption and quick drying, waterproof and stain release.

Item	2014 version	2024 version
Moisture absorption and quick drying	GB/T 21295-2014 Section 4.12.6	GB/T 21295-2024 Section 5.3
Waterproof	GB/T 21295-2014 Section 4.12.2 & 4.12.3	GB/T 21295-2024 Section 5.4
Stain release	≥Grade 3-4, Original and bleached products can be reduced by half grade.	Initial color difference ≤Grade 3: test color difference ≥ Grade 3-4 Initial color difference ≥Grade 3-4 : test color difference should be higher than the initial color difference by 0.5 grade.

5. Modified the requirements of Phthalate, flammability, flame retardant and NP & NPEO

Item	2014 version	2024 version
Phthalates	GB/T 21294-2014 Table 6	GB/T 21294-2024 Table 16
Flammability	GB/T 21294-2014 Section 4.2	GB/T 21294-2024 Section 6.1.6
flame retardants	GB/T 21294-2014 Section 4.5	GB/T 21294-2024 Section 6.2.3
NP & NPEO	NP+OP ≤100 mg/kg NPEO+OPEO ≤1000 mg/kg	NP,NPEO Total ≤100 mg/kg NPEO <100 mg/kg No need to assess products that marked as non-washable.

How Does this Impact You? Contact Us to Discuss

Any comments and/or questions please contact your local customer service representative or email to:

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