

**The Committee for Conformity Assessment of Accreditation and Certification
on Functional and Technical Textiles**

Specified Requirements of Cycling Clothing

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Planning Unit	Reviewed by	Approved by
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Document Revision History

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Edition	Revision Reason and Content Description	Revised Page	Revised Date
1.0	New issuance		December 24, 2013

1. Applicable Scope:

This Standard applies for assessment and test method of basic quality and functional requirement for cycling clothing (see appendix).

2. Grade Standard:

2.1 Basic quality requirements

Table 1. Basic quality requirements

No.	Item	Grade
1	Wash durability	Fade
		Pollution
2	Sweat durability	Fade
		Pollution
3	Light durability	Over grade 4
4	Friction durability (except for white)	Dry friction
		Wet friction
5	Textile size change (%)	Synthesis fiber and hybrid fabric: -5~+2%
6		Others: -8~+3%
7	Hook pilling (applicable to cycling clothing)	Over grade 3
8	Pilling (applicable to cycling painting)	Over grade 4
9	Seam efficiency (%)	Over 80%
10	Moisture diffusion (mm ²)	Over 900
11	Drying speed (%)	Below 35
12	Moisture absorption - drop (sec)	Below 2
13	Moisture absorption - core absorption (mm)	Over 80
14	Elongation rate (rebound) (%)	Note the elongation rate for the textiles with spring fiber over 90.

Remark: The functional color like fluorescence, light reflection or special color decided by the interested parties.

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<p>2.2 Functional Requirements</p> <p>2.2.1 Requirement for UV protection textile</p> <p>Classified as the current status and wash 20 times. The wash includes (1) wash label, 8B of Table 7, (2) of Table 3 in CNS 15140 or (3) decided by the interested parties.</p> <p>The requirement for UV protection textiles must reach over 40 according to CNS 15001.</p> <p>2.2.2 Requirement for antibacterial textile</p> <p>Classified as the current status and wash 20 times. The wash includes (1) wash label, 8B of Table 7, (2) of Table 3 in CNS 15140, (3) decided by the interested parties or agent according to (10) of 3.2 in CNS 14945.</p> <p>The antibacterial activity (staphylococcus aureus and streptococcus pneumoniae) must reach over 2.0 according to CNS 20743.</p> <p>3. Test Method:</p> <p>3.1 Test method for wash durability: In compliance with A-2 in CNS1494.</p> <p>3.2 Test method for sweat durability: In compliance with CNS1496.</p> <p>3.3 Test method for light durability: In compliance with A in CNS 3846.</p> <p>3.4 Test method for friction durability: In compliance with Type I in CNS1499.</p> <p>3.5 Test method for textile size change: The samples refer to CNS 13752 to take the maximum size, and in compliance with 8B of Table 7 in CNS 15140 and (2) drying condition of Table 3.</p> <p>3.6 Test method for hook pilling: In compliance with A in CNS 12475.</p> <p>3.7 Test method for pilling: In compliance with A in CNS 8040.</p> <p>3.8 Seam efficiency: The seam efficiency is calculated according to the following formula after the strength is tested in compliance with 6.2 Test method for seam efficiency of CNS 15538 and CNS 8150.</p> <p style="padding-left: 40px;">Seam efficiency = Strength after seam/Original strength x 100%</p> <p>3.9 Test of textile moisture diffusion: In compliance with 4.1 to 4.3 of CNS 15659-1.</p> <p>3.10 Test of textile moisture drying: In compliance with 4.1, 4.2 and 4.4 of CNS 15659-1.</p> <p>3.11 Test of textile moisture absorption - drop absorption: In compliance with 4.5 of CNS 15659-1.</p> <p>3.12 Test of textile moisture absorption - core absorption: In compliance with 4.6 of CNS 15659-1.</p>	
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<p>3.13 Test method for elongation rate: In compliance with B Constant weight of 6.15.2 in CNS 5612 and Table 3.</p> <p>3.14 Test method for UV protection textiles: In compliance with CNS 15001.</p> <p>3.15 Test method for antibacterial textiles: In compliance with 8.1 absorption method of ISO 20743.</p> <p>4. Report:</p> <p>4.1 Grade of basic quality</p> <p>4.2 Grade of functional requirement</p> <p>5. References:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">CNS 15538</td> <td>Knitted sport clothing</td> </tr> <tr> <td>CNS 12475</td> <td>Test method of hook pilling for weaves and knits</td> </tr> <tr> <td>CNS 8040</td> <td>Test method of pilling for weaves and knits</td> </tr> <tr> <td>CNS 15659-1</td> <td>Assessment of textile moisture absorption - Part 1: Combination test method</td> </tr> <tr> <td>CNS 13752</td> <td>Test method for knit: 6.15.2 Constant weight method of elongation rate</td> </tr> <tr> <td>CNS 15001</td> <td>Assessment of UV protection textiles</td> </tr> <tr> <td>ISO 20743</td> <td>Textile - 8.1 Absorption method for determination of antibacterial activity of textile products</td> </tr> <tr> <td>CNS 14945</td> <td>Assessment of general-purpose antibacterial textiles</td> </tr> </table> <p>6. Appendix</p> <p>This Standard is reviewed by the Specified Requirement Execution Team, and issued after approved by the Committee Director. The same procedures are applied when revised.</p>		CNS 15538	Knitted sport clothing	CNS 12475	Test method of hook pilling for weaves and knits	CNS 8040	Test method of pilling for weaves and knits	CNS 15659-1	Assessment of textile moisture absorption - Part 1: Combination test method	CNS 13752	Test method for knit: 6.15.2 Constant weight method of elongation rate	CNS 15001	Assessment of UV protection textiles	ISO 20743	Textile - 8.1 Absorption method for determination of antibacterial activity of textile products	CNS 14945	Assessment of general-purpose antibacterial textiles
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Appendix

Basic model for cycling clothing

1. The bicycles include mountain bikes, road bicycles, travel bikes and daily bikes. The clothing will depend on the bike you ride. In order to consider the wind resistance, the cycling clothing will fit the body.
2. The clothing materials are based on the flexibility and light weight to further provide moisture absorption, UV protection and antibacterial.
3. The top clothing is designed with the collar, the zipper, the jacket and the pocket on the rear waist; the painting is trimmed in ergonomics, and designed with a mat in a crotch to avoid the friction and vibration. The mat is designed for fitness, comfort and antibacterial. The cuff can be provided with a skid-proof band to avoid skid.
4. The clothing thickness and the sleeve or painting length can be appropriately adjusted by the season. A vest or a jacket (light weight) can be additionally worn to block the wind and water.
5. In order to enhance the riding safety, the cycling clothing is made in the bright color or embossing. Some of light-reflection sticker and embossment can be sewed on it.
6. Other accessories for cycling clothing include the topee, the head scarf, the mask and the gloves.

The cycling clothing applicable to this Standard indicates the top clothing and painting which can fit the body. The reference cases of the cycling clothing are as follows:

