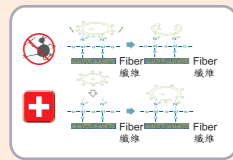
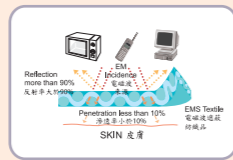


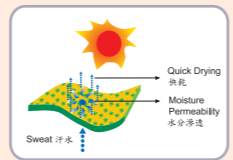
FTTS-FA-001
一般用途抗菌加工紡織品
Antibacterial Textiles for General Use



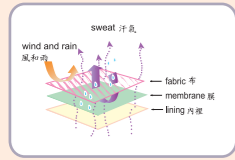
FTTS-FA-002
醫療用途抗菌加工紡織品
Antibacterial Textiles for Medical Use



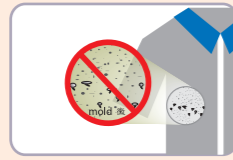
FTTS-FA-003
防電磁波紡織品
Electromagnetic Shielding Textiles



FTTS-FA-004
吸濕排汗速乾紡織品
Moisture Transferring and Quick Drying Textiles



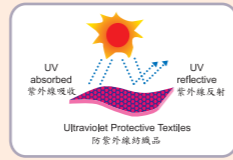
FTTS-FA-005
透濕防水紡織品
Water-Vapor Permeable and Liquid-Water Impermeable Textiles



FTTS-FA-006
防黴性紡織品
Antifungal Textiles



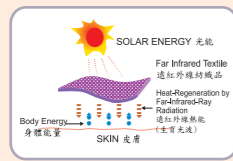
FTTS-FA-007
防縐紡織品
Wrinkle Free Textiles



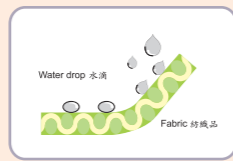
FTTS-FA-008
防紫外線紡織品
Ultraviolet Protective Textiles



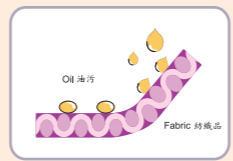
FTTS-FA-009
抗靜電紡織品
Antistatic Textiles



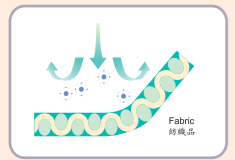
FTTS-FA-010
遠紅外線紡織品
Far Infrared Textiles



FTTS-FA-011
撥水紡織品
Water Repellent Textiles



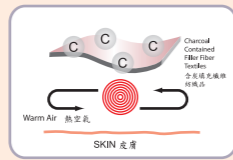
FTTS-FA-012
撥油紡織品
Oil Repellent Textiles



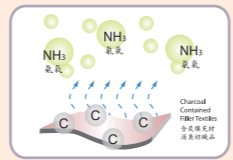
FTTS-FA-013
易去污紡織品
Stain Release Textiles



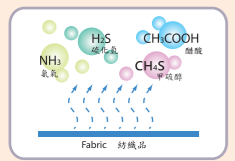
FTTS-FA-015
防焰紡織品
Flame-Resistant Textiles



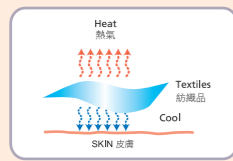
FTTS-FA-016
保暖性含炭填充纖維紡織品
Charcoal Contained Filler Fiber Textiles for Warmth Retention



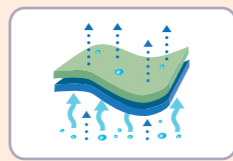
FTTS-FA-017
含炭填充材除臭性紡織品
Deodorization for Charcoal Contained Filler Textiles



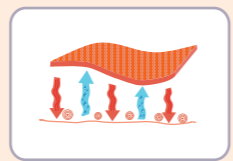
FTTS-FA-018
異味去除(除臭)紡織品
Specified Requirements of Deodorized Textiles



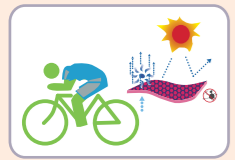
FTTS-FA-019
瞬間涼感紡織品
Cool Feeling Textiles



FTTS-FA-020
吸濕排汗速乾多層
Liquid Moisture Management Properties of Textile Fabrics



FTTS-FA-023
吸濕發熱紡織品
Generating Heat-Textiles by Moisture Absorption



FTTS-GA-024
運動用自行車衣
Cycling Clothing



FTTS-GA-025
慢跑服
Jogging Clothing



FTTS-GA-026
節能衫
Specified Requirements of Energy-saving Clothing



更多資訊可至官網查詢
<http://tft.tffapproved.org.tw>

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機能性紡織品
驗證項目一覽
Certification System

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台灣機能性紡織品



Taiwan Functional Textiles
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Taiwan Functional Textiles
台灣機能性紡織品

TAIWAN FUNCTIONAL TEXTILES

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Taiwan Textile Federation
紡拓會



經濟部國際貿易局
Bureau of Foreign Trade,
Ministry of Economic Affairs

經濟部國際貿易局 廣告 AD by Bureau of Foreign Trade

流行時尚新主張!

台灣機能性紡織品驗證為您把關!

品質
Quality

• 舒適
• Comfortably

• 安全
• Safe

• 健康
• Healthy

現代消費者對於服飾及家飾用品的購買需求，已經不僅僅是注重流行感而已，更強調符合人體工學與功能性，於是穿得舒適、安全及健康已經成為一種消費趨勢，在許多先進國家發展機能性紡織品及智慧型成衣早已蔚為風潮。

近年來，台灣廠商對於投入機能性紡織品研發已具成效，許多知名品牌並已導入發展及生產相關產品，此一市場需求更被視為紡織產業升級及未來發展的重要方向。然而由於機能性紡織品通常具有「看不到、摸不到、用了才知道」的特性，買主及消費者不易直接從產品外觀及觸感上辨別產品之好壞，導致此類產品無法在行銷推廣上充分展現其具有的特殊功能性。因此，市場上極需一個具有公信力之獨立驗證機構，專門對機能性紡織品提供一套客觀的驗證服務，一方面除了可以協助業者行銷及拓展市場外，另一方面並可提供國內外買主及消費者透過此一驗證標章來辨明機能性紡織品之品質。

有鑑於此，紡拓會積極規劃推動TFT台灣機能性紡織品驗證標章業務，目前引用「機能性暨產業用紡織品認證與驗證評議委員會」制定之標準，共訂定23項驗證標準，提供機能性紡織品生產及銷售廠商之產品驗證服務，本驗證標章已向台灣、美國、歐盟、日本及韓國等地區完成註冊。



Taiwan Functional Textiles
台灣機能性紡織品

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About Taiwan Functional Textiles

When it comes to sports and casual clothing, consumers nowadays are not only seeking fashion, but also comfort and health. It is now a common practice in industrialized countries to announce new functional textiles on a regular basis. Known examples are pure cotton wrinkle free apparel for office goers, sporting fabrics made of elastic filaments, filaments with optimal absorption and sweat discharge, sun protective textiles, thermal textiles as well as far-infrared products featuring heat preservation among others. In brief, the textile industry is launching a totally different campaign from the past.

After many efforts in R&D in functional textiles, the Taiwan textile industry has come to agree on what they ought to do in the future. Renowned firms have been devoting efforts in research and production of functional textile goods. As products can vary in quality, buyers and consumers must test and use the textiles to verify the acclaimed functions. Therefore, the importance of product quality assurance approved by a reliable organization was given high precedence. A certification system would be important to local and overseas buyers and consumers who can look for the certificate label to identify the quality of the products they are buying.

In view of this, Taiwan Textile Federation (TTF) is committed to planning and promoting the "Taiwan Functional textiles" (TFT) certification system. At present, TTF has established several certification standards, including the standard for 23 products, based on the criteria set up by "Committee for Conformity Assessment on Accreditation and Certification of Functional and Technical Textiles" and offered product certification service to functional textile manufacturers and merchandisers. The TFT certificate label is now duly registered in Taiwan, the US, the Europe Union, the Korea and Japan.

驗證模式說明

Certification Modes of Taiwan Functional Textiles

本驗證制度依申請者業務性質需求不同，可區分為下列幾種驗證模式：

This certification system is divided into the following modes according to applicant requirements:

1. 研發樣品驗證模式 Pattern Certification Mode

申請者於研發階段尚未進行量產之產品適用本模式。申請者將樣品交予本會後進行檢測，經驗證通過後本會承認該樣品具有功能品質有效性。

This mode applies to products in the R&D phase but not yet manufactured on production lines. The applicant shall submit a sample of the product to Taiwan Textile Federation (TTF) for testing. If the result of sample testing conforms to the certification standard, TTF will certify the functional quality of the sample.

3. 符合型式試驗驗證模式 Consistent with Prototype Mode

申請者於研發階段且能確保量產時生產與型式試驗報告原型式一致之產品適用本模式。申請者須提供技術文件及樣品，本會並於必要時進行工廠檢查。文件審查與樣品檢測通過後，申請者須簽署聲明書保證合約效期內所生產之產品與型式試驗報告原型式一致。經驗證通過後本會承認該等產品具有功能品質有效性。

The mode applies to products in R&D phase and applicants can ensure the quality of a yield production corresponds with the prototype described in the prototype test report. The applicant must provide technique documents and samples, TTF will conduct factory inspection in necessary. If the results of documentation review and sample testing conform to the certification standard, the applicant will be asked to sign a declaration to assure that products produced during the duration of the contract will be identical to the prototype described in the prototype test report. TTF will then certify the functional quality of products of the same prototype.



2. 逐批檢驗驗證模式 Batch-Examination Certification Mode

申請者已進行量產或擁有固定數量之產品適用本模式。申請後本會派員赴申請者放置產品處進行產品抽樣送交檢測，經驗證通過後本會承認該抽樣批次產品具有功能品質有效性。

This mode applies to the certification of single batches of quality-specified products. The sampling and examination procedures will be executed after applying. After receiving the application, TTF will dispatch an official to conduct a product sampling at the site where the applicant places the products subject to testing. If the result of sample testing conforms to the certification standard, TTF will certify the functional quality of the batch of products being sampled.

4. 產品品質保證驗證模式 Quality Guarantee Certification Mode

申請者已進行量產且能保證品質持續相同穩定之產品適用本模式，惟僅限製造廠商申請。申請者須提供工廠生產品質認證證書及產品生產規劃文件，並配合本會進行工廠檢查。申請後本會派員赴申請者放置產品處進行產品抽樣送交檢測，經驗證通過後，本會承認該批次產品及合約效期內所持續生產之同型式產品具有功能品質有效性。

This mode applies to quality-specified products on a continuous production line and the applicant can assure that products continuously produced in the future will deliver the same consistent quality. The applicant, whose status must be a manufacturer, shall provide the production quality certificate and product production plan of its factory. Moreover, it shall assist TTF in conducting the factory inspection. After receiving the application, TTF will dispatch an official to conduct a product sampling at the site where the applicant places the products subject to testing. If the results of documentation review and sample testing conform to the certification standard, TTF will certify the functional quality of the batch of products being sampled as well as products of the same prototype continuously produced by the applicant during the duration of the contract.

驗證流程

Procedure of Taiwan Functional Textiles



全球展覽拓銷活動

Campaigns of Taiwan Functional Textiles

資料來源至 102.04 止

| 展覽名稱 | 城市 | 產品範圍 |
|-------------------------------------------|-------|---------------------------|
| 產業用及家用紡織品拓銷活動 | | |
| 德國 Techtextil 產業用紡織品展 | 法蘭克福 | |
| 中國 Cinte Techtextil 產業用紡織品展 | 上海 | 高科技及產業用紡織品 |
| 北美 Techtextil 產業用紡織品展 | 亞特蘭大 | |
| 運動及戶外用紡織品拓銷活動 | | |
| 美國 Outdoor Retailer 冬季戶外活動用品展 | 鹽湖城 | |
| 德國 ISPO Munich 慕尼黑運動用品展 | 慕尼黑 | |
| 德國 European Outdoor 戶外活動用品展 | 腓特烈港 | 功能性成品布、副料及戶外活動服裝、服飾品 |
| 美國 Outdoor Retailer 夏季戶外活動用品展 | 鹽湖城 | |
| 上海 ISPO 運動用品展 | 上海 | |
| Asia Outdoor 亞洲戶外用品展覽會 | 南京 | |
| 台北紡織展 (TITAS) | 台北 | 纖維、紗線、布料、副料、服裝、服飾品、產業相關服務 |
| 衣著用紡織品拓銷活動 | | |
| 拉斯維加斯 (春夏/秋冬) Magic Show 國際紡織品展 | 拉斯維加斯 | 成品布、副料、服裝、服飾品 |
| Avantex Paris Autumn 巴黎創新紡織品展 | 巴黎 | 成品布、副料 |
| 中國國際紡織面料及輔料 (春夏/秋冬) 博覽會 (上海Intertextile展) | 上海 | |
| 台北魅力國際時裝展 (TIS) | 台北 | 成品 |

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機能性紡織品 驗證項目一覽

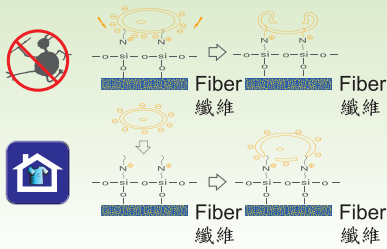
TFT Certification System



- P5. FTTS-FA-001**
一般用途抗菌加工紡織品
Antibacterial Textiles for General Use
- P6. FTTS-FA-002**
醫療用途抗菌加工紡織品
Antibacterial Textiles for Medical Use
- P7. FTTS-FA-003**
防電磁波紡織品
Electromagnetic Shielding Textiles
- P8. FTTS-FA-004**
吸濕速乾紡織品
Moisture Transferring and Quick Drying Textiles
- P9. FTTS-FA-005**
透濕防水紡織品
Water-Vapor Permeable and Liquid-Water Impermeable Textiles
- P10. FTTS-FA-006**
防黴性紡織品
Antifungal Textiles
- P11. FTTS-FA-007**
防縐紡織品
Wrinkle Free Textiles
- P12. FTTS-FA-008**
防紫外線紡織品
Ultraviolet Protective Textiles
- P13. FTTS-FA-009**
抗靜電紡織品
Antistatic Textiles
- P14. FTTS-FA-010**
遠紅外線紡織品
Far Infrared Textiles
- P15. FTTS-FA-011**
撥水紡織品
Water Repellent Textiles
- P16. FTTS-FA-012**
撥油紡織品
Oil Repellent Textiles
- P17. FTTS-FA-013**
易去污紡織品
Stain Release Textiles
- P18. FTTS-FA-015**
防焰紡織品
Flame-Resistant Textiles
- P20. FTTS-FA-016**
保暖性含炭填充纖維紡織品
Charcoal Contained Filler Fiber Textiles for Warmth Retention
- P21. FTTS-FA-017**
含炭填充材消臭性紡織品
Deodorization for Charcoal Contained Filler Textiles
- P22. FTTS-FA-018**
異味去除(消臭)紡織品
Specified Requirements of Deodorized Textiles
- P23. FTTS-FA-019**
瞬間涼感紡織品
Cool Feeling Textiles
- P24. FTTS-FA-020**
吸濕排汗速乾多層
Liquid Moisture Management Properties of Textile Fabrics
- P25. FTTS-FA-023**
吸濕發熱紡織品
Generating Heat-Textiles by Moisture Absorption
- P26. FTTS-GA-024**
運動用自行車衣
Cycling Clothing
- P28. FTTS-GA-025**
慢跑服
Jogging Clothing
- P30. FTTS-GA-026**
節能衫
Specified Requirements of Energy-saving Clothing

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FTTS-FA-001



用語解釋 Terminology :

抗菌加工 Anti-bacterial treatment :

係指紡織品經加工處理來減少細菌在製品上生長而達到減菌效果之目的。

A finishing treatment aiming at inhibiting the growth of bacteria on textile.

減菌率 Reduction rate :

係指試驗細菌在紡織品上所減少細菌數目之百分比。

Percentage reduction of bacteria (%)

參考標準 Referenced Standard :

- AATCC100-1999
Antibacterial Finishes on Textile Materials:
Assessment of
- AATCC 135 -2001
Dimensional Changes in Automatic Home
Laundering of Woven and Knit Fabrics
- JIS L1902-1998
Testing Method for Antibacterial of Textile

FTTS-FA-001

一般用途抗菌加工紡織品

Antibacterial Textiles for General Use

適用範圍 Scope :

本標準適用於測試經抗菌加工之紡織相關製品，視其是否對細菌產生減菌之定量方法來判斷其是否具有減菌效果。

This criterion is applicable to the evaluation and testing of antibacterial activity of textile for general use. The quantitative evaluation of antibacterial activity is judged by the percentage of bacteria reduction.

等級標準 Performance specification :

判定 Criteria :

必須經由合格測試實驗室測試通過可耐50次、20次水洗或無需水洗(一次使用拋棄式)對2株試驗菌種之減菌率為2級(含)以上，方符合本項一般用途抗菌加工紡織品驗證規範。

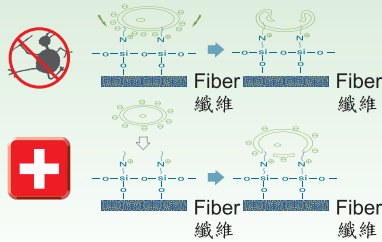
In order to meet the requirement set forth in FTTF-FA-001, textile must achieve an antibacterial activity level, expressed by percentage reduction of bacteria (%), of grade 2 or above on two specified test bacteria after being washed for 50, 20 cycles by an approved lab (no washing is required in the case of disposable products).

| 類型 Type | 等級 Grade | 分類 Classification | 耐水洗 Washing cycles | 減菌率 (%) percent reduction of bacterial, R |
|------------|-------------|----------------------|---------------------------------------------|----------------------------------------------|
| I | AAAAA | 優良 Excellent | 水洗50次 50 Washing | 減菌率 ≥ 99.9 $R \geq 99.9$ |
| | AAA | 好 Good | 水洗50次 50 Washing | $99 \leq$ 減菌率 < 99.9 $99 \leq R < 99.9$ |
| II | AAAAA | 優良 Excellent | 水洗20次 20 Washing | 減菌率 ≥ 99.9 $R \geq 99.9$ |
| | AAA | 好 Good | 水洗20次 20 Washing | $99 \leq$ 減菌率 < 99.9 $99 \leq R < 99.9$ |
| III | AAAAA | 優良 Excellent | 無需水洗 No washing required (disposable) | 減菌率 ≥ 99.9 $R \geq 99.9$ |
| | AAA | 好 Good | 無需水洗 No washing required (disposable) | $99 \leq$ 減菌率 < 99.9 $99 \leq R < 99.9$ |

毒性測試 Toxicity test :

申請者必須檢附抗菌劑之皮膚刺激性(PII值 < 2)或過敏性(陰性)之動物實驗報告和急性經口毒性報告—小鼠 > 1000 mg/kg無死亡和異常現象之第三者實驗室報告正本，亦或是原料廠商所提供之第三者檢驗報告副本及保證書。

The applicant must enclose an animal test report of dermal irritation test (PII primary irritation index < 2) or allergenic test (negative) in addition to an acute oral toxicity test report (LD50 in mice > 1000 mg/kg ,no mortality nor abnormal symptom) for the antibacterial finishing reagent applied to the treated textiles. The test reports must be issued by third party labs and must be originals. This requirement can also be fulfilled by enclosing a guarantee letter and duplicates of test reports (issued by the third party) provided by antibacterial finishing reagent suppliers.



用語解釋 Terminology :

抗菌加工 Anti-bacterial treatment :

係指紡織品經加工處理來減少細菌在製品上生長而達到減菌效果之目的。

A finishing treatment aiming at inhibiting the growth of bacteria on textile.

減菌率 Reduction rate :

係指試驗細菌在紡織品上所減少細菌數目之百分比。

Percentage reduction of bacteria (%)

FTTS-FA-002

醫療用途抗菌加工紡織品

Antibacterial Textiles for Medical Use

適用範圍 Scope :

本標準適用於測試經抗菌加工之醫療用紡織相關製品，視其是否對細菌產生減菌之定量方法來判斷其是否具有減菌效果。

This criterion is applicable to the evaluation and testing of antibacterial activity of textile for medical use. The quantitative evaluation of antibacterial activity is judged by the percentage of bacteria reduction.

等級標準 Performance specification :

判定 Criteria :

必須經由合格測試實驗室測試通過可耐100次水洗或無需水洗(一次使用拋棄式)對2株試驗菌種之減菌率為2級(含)以上，方符合本醫療用途抗菌加工紡織品驗證規範。

In order to meet the requirement set forth in FTTF-FA-001, textile must achieve an antibacterial activity level, expressed by percentage reduction of bacteria (%), of grade 2 or above on two specified test bacteria after being washed for 100 cycles by an approved lab (no washing is required in the case of disposable products).

參考標準 Referenced Standard :

- AATCC100-1999
Antibacterial Finishes on Textile Materials:
Assessment of
- AATCC 61 3A-2001
Colorfastness to laundering,home and
commercial accelerated
- JIS L1902-1998
Testing Method for Antibacterial of Textile

| 類型 Type | 等級 Grade | 分類 Classification | 耐水洗 Washing cycles | 減菌率 (%) percent reduction of bacterial, R |
|------------|-------------|----------------------|---------------------------------------------|----------------------------------------------|
| I | AAAAA | 優良 Excellent | 水洗100次 100 Washing | 減菌率 ≥ 99.9 R ≥ 99.9 |
| | AAA | 好 Good | 水洗100次 100 Washing | 99 ≤ 減菌率 < 99.9 99 ≤ R < 99.9 |
| II | AAAAA | 優良 Excellent | 無需水洗 No washing required (disposable) | 減菌率 ≥ 99.9 R ≥ 99.9 |
| | AAA | 好 Good | 無需水洗 No washing required (disposable) | 99 ≤ 減菌率 < 99.9 99 ≤ R < 99.9 |

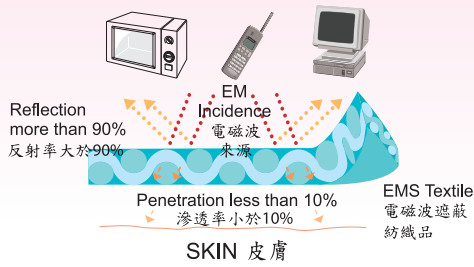
毒性測試 Toxicity test :

申請者必須檢附抗菌劑之皮膚刺激性(PII值 < 2)或過敏性(陰性)之動物實驗報告和急性經口毒性報告-小鼠 > 1000 mg/kg無死亡和異常現象之第三者實驗室報告正本，亦或是原料廠商所提供之第三者檢驗報告副本及保證書。

The applicant must enclose an animal test report of dermal irritation test (PII primary irritation index < 2) or allergenic test (negative) in addition to an acute oral toxicity test report (LD50 in mice >1000 mg/kg ,no mortality nor abnormal symptom) for the antibacterial finishing reagent applied to the treated textiles. The test reports must be issued by third party labs and must be originals. This requirement can also be fulfilled by enclosing a guarantee letter and duplicates of test reports (issued by the third party) provided by antibacterial finishing reagent suppliers.

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FTTS-FA-003



FTTS-FA-003 防電磁波紡織品 Electromagnetic Shielding Textiles

用語解釋 Terminology :

dB (Decibels) :

材料屏蔽電磁波效果的單位。
an unit of electromagnetic shielding.

屏蔽效果 Shielding Effectiveness :

(1)如果接收器所量測單位為功率，則屏蔽效果為
 $SE = 10 \log P1/P2$ (Decibels · dB)

P1:有屏蔽素材存在時接收器所量測之功率。

P2:沒有屏蔽素材存在時接收器所量測之功率。

(2)如果接收器所量測單位為電場強度，則屏蔽效果為
 $SE = 20 \log E1/E2$ (Decibels · dB)

E1:有屏蔽素材存在時接收器所量測之電場強度。

E2:沒有屏蔽素材存在時接收器所量測之電場強度。

(1) With radiated power as its measurement, shielding effectiveness can be calculated according to the following formula:
 $SE = 10 \log P1/P2$ (dB, Decibels)

P1 = received radiated power with the shielding material present.

P2 = received radiated power without the shielding material.

(2) With electric field intensity, shielding effectiveness can be calculated according to the following formula:
 $SE = 20 \log E1/E2$ (dB, Decibels)

E1 = electric field intensity being measured thru shielding material.

E2 = electric field intensity being measured with no shielding.

適用範圍 Scope :

適用任何形式紡織品，包括梭織物、針織物、塗佈/貼合織物及非織物等。如有必要前述紡織品須經水洗方式重複洗滌與耐氣候試驗，考量其電磁波屏蔽效果的衰減性。

This criterion is applicable to textiles in all forms, including woven, knitted, coated/laminated fabric and nonwoven. To consider the durability, the pretreatment, ex: repeated laundering, weathering, may be required.

等級標準 Performance specification :

本規範針對用途分為

The functional requirements in the test method are classified according to product end-use:

Class I - 專業用途 Professional use :

醫療器材、隔離材料、電子廠專業用安全制服、電子元件或所組合之儀器設備耐受性隔離材料及其他新應用。

for medical devices , safety uniform , shielding material for electronic component , assembly equipment and other application.

| 等級 Grading | 5 優良 Excellent | 4 良好 Very good | 3 好 Good | 2 可 Moderate | 1 尚可 Fair |
|------------------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 電磁波屏蔽效果值範圍 Range | $SE > 60dB$ | $60dB \geq SE > 50dB$ | $50dB \geq SE > 40dB$ | $40dB \geq SE > 30dB$ | $30dB \geq SE > 20dB$ |

Class II - 民生用途 General use :

一般休閒服飾、辦公室制服 (電腦公司、電信局等)、孕婦裝、圍裙、消費性電子產品及相關通訊與電器用品護套與外蓋及其他新應用。

for casual wear, uniforms (computer and telecom company) , aprons , maternity dress , protective covers for consumer electronic products and other application.

| 等級 Grading | 5 優良 Excellent | 4 良好 Very good | 3 好 Good | 2 可 Moderate | 1 尚可 Fair |
|------------------|----------------|-----------------------|-----------------------|----------------------|---------------------|
| 電磁波屏蔽效果值範圍 Range | $SE > 30dB$ | $30dB \geq SE > 20dB$ | $20dB \geq SE > 10dB$ | $10dB \geq SE > 7dB$ | $7dB \geq SE > 5dB$ |

一般要求 General requirement for pretreatment :

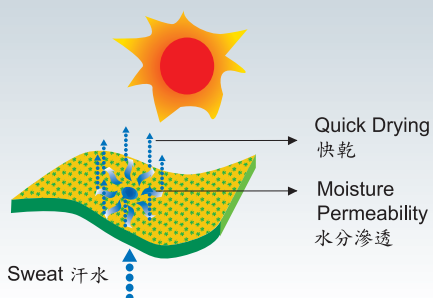
依不同用途選擇適當的一般性能要求

Choose the proper general requirement according to product end-use.

| 項目 Item | 基本要求 Basic requirement | 依據標準 Test method |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 耐水洗性 Washing durability | 專業用途以現狀測試為主，民生用途分為現狀、水洗20次、水洗50次三種層級或依客戶需求而定。 professional use:mainly tested in original state, general use: tested in original state,after 20 washes,50 washes or by request. | 梭織物、塗佈/貼合織物及非織物等以AATCC 135(1)IV(A)ii法。 針織物以AATCC 135(2)IV(A)iii法。 woven,coated/laminated fabric and non-woven fabric : washed based on AATCC 135 (1)IV(A)ii. knitted: washed based on AATCC 135 (2)IV(A)iii |
| 耐氣候性 Accelerated ageing | 4級以上 > Grade 4 | ISO 105 B02 |

參考標準 Referenced Standard :

- ASTM D4935
Standard Test Method for Measuring the Electromagnetic Shielding Effectiveness of Planar Materials.
- MIL-STD-285
Attenuation Measurements for Enclosures, Electromagnetic Shielding, for Electronic Test Purposes, Method of.



用語解釋 Terminology :

吸濕速乾紡織品

Moisture transferring and quick drying textiles :

為達成乾爽舒適之穿著效果，織物應具備吸收液態水份並迅速傳導遠離皮膚、蒸發乾燥之機能。

To achieve dry and comfort in wearing, textiles should possess the properties of moisture transferring and quick drying.

參考標準 Referenced Standard :

- **CNS 13905 L 3246**
Methods of Test for Absorbency of Textiles-5.1.1 (Dropping)
Methods of Test for Absorbency of Textiles-5.1.2 (Byreck)
- **JIS L 1907-2010**
Test Methods for Water Absorbency of Textiles-7.1.1(Dropping)
Test Methods for Water Absorbency of Textiles-7.1.2(Byreck)
- **AATCC 79-2000**
Absorbency of Bleached Textiles.

FTTS-FA-004

吸濕速乾紡織品

Moisture Transferring and Quick Drying Textiles

適用範圍 Scope :

本規範適用於吸濕速乾紡織服飾產品其傳導液態水份及速乾程度之評價標準及試驗方法。

This criterion is applicable to the evaluation and testing of moisture transferring and quick drying textiles.

等級標準 Performance specification :

| 類型(註1) Type (Note1) | 擴散能力 Diffusion ability | 乾燥速率 Drying ability | 吸水速度(滴下法) Absorbency speed (Dropping) | 吸水速度蕊吸法 Absorbency speed (Byreck) | 分類 Classification |
|------------------------|------------------------------|---------------------------|---------------------------------------------|-----------------------------------------|----------------------|
| I | 5 | 5 | 通過(註2) Pass(Note2) | $X \geq 130\text{mm}$ | 優良 Excellent |
| II | 4 | 4 | 通過(註2) Pass(Note2) | $130\text{mm} > X \geq 100\text{mm}$ | 很好 Very Good |
| III | 3 | 3 | 通過(註2) Pass(Note2) | $100\text{mm} > X \geq 80\text{mm}$ | 好 Good |

註1 Note1 :

同組樣本之各項試驗等級，以最低值判定「類型」。

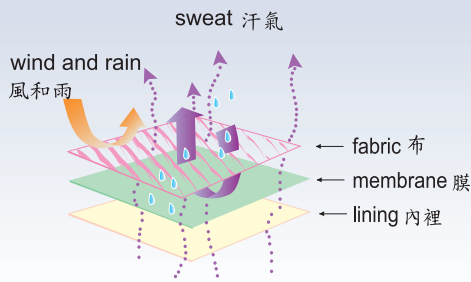
Minimum value is used to determine "type" in each test grade of the same sample group.

註2 Note2 :

針織物「不再出現鏡面反射時間」之平均值 ≤ 2 秒者；梭織物之平均值 ≤ 5 秒者。

The average time of the water drop to lose its specular reflectance must less than 2 seconds for knitted, 5 seconds for woven; for woven fabric the average time shall not be more than 5 seconds.

FTTS-FA-005



用語解釋 Terminology :

水蒸氣阻度Ret

Water vapor resistance :

水蒸氣穿透織物之阻度。

Resistance of water vapor evaporating from textile and apparel.

參考標準 Referenced Standard :

- **CNS 15000 L1034**
防水透濕紡織品性能評估
Assessment of water-vapor permeable and liquid-water impermeable textiles
- **CNS 15102 L3256**
紡織品舒適性-穩態下熱阻度及水蒸氣阻度(流汗熱板)試驗法
Textiles - Physiological effects - Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded-hotplate test)
- **CNS 10460 L3201**
紡織製品防水性檢驗法-靜水壓試驗
Method of test for water resistance of clothes - Hydrostatic pressure test
- **CNS 15140 L3263**
紡織品試驗之家庭洗滌及乾燥程序
Textiles - Domestic washing and drying procedures for textile testing
- **ISO 7854**
Rubber-or Plastics-Coated Fabrics-Determination of Resistance to Change by Flexing
- **ISO 2411**
Rubber-or Plastics-Coated Fabrics-Determination of Coating Adhesion

FTTS-FA-005

透濕防水紡織品

Water-Vapor Permeable and Liquid-Water Impermeable Textiles

適用範圍 Scope :

本標準適用於驗證透濕防水紡織品之透濕性、防水性及一般性能之品質要求。

This criterion is applicable to the evaluation and testing of water vapor permeability & water resistance of textiles.

等級標準 Performance specification :

水蒸氣阻度 Water vapor resistance , Ret

| 水蒸氣阻度 Ret (m ² · Pa / W) | 等級 Grade | 分類 Classification |
|-------------------------------------|----------|-------------------|
| 水蒸氣阻度 Ret < 6 | 5 | 優 Excellent |
| 6 ≤ 水蒸氣阻度Ret < 13 | 4 | 很好 Very good |
| 13 ≤ 水蒸氣阻度Ret < 27 | 3 | 好 Good |
| 27 ≤ 水蒸氣阻度Ret < 40 | 2 | 可 Moderate |
| 40 ≤ 水蒸氣阻度Ret < 50 | 1 | 尚可 Fair |

靜水壓 water penetration resistance,Wp

| 靜水壓 Hydrostatic Pressure (mmH ₂ O) | 等級 Grade | 分類 Classification |
|-----------------------------------------------|----------|-------------------|
| 15000 ≤ Wp | 5 | 優 Excellent |
| 8000 ≤ Wp < 15000 | 4 | 很好 Very good |
| 4000 ≤ Wp < 8000 | 3 | 好 Good |
| 2000 ≤ Wp < 4000 | 2 | 可 Moderate |
| 300 ≤ Wp < 2000 | 1 | 尚可 Fair |

一般要求 General requirement for pretreatment

依不同產品用途選擇適當的一般性能要求

Choose the proper general requirement according to product end-use.

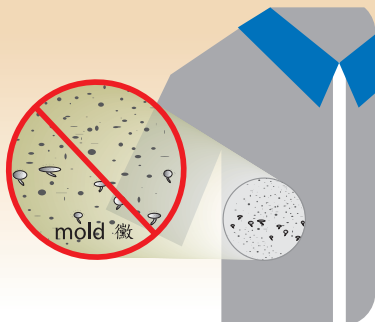
| 類型 Type | 水蒸氣阻度 Water vapor resistance, Ret | 靜水壓 Water penetration resistance,Wp | 耐水洗 Durability | 抗凍耐彎繞 Flexing resistance | 剝離強度 Adhesive Strength |
|---------|-----------------------------------|-------------------------------------|----------------------------------------------------------------|--------------------------|-----------------------------|
| Ⅰ | 4級以上 Above Grade 4 | 4級以上 Above Grade 4 | 水洗10次·耐水壓4級以上 10 times washing, grade 4 of water resistance | 外觀無變化 No change | 200 g/cm以上 Above 200g/cm |
| Ⅱ | 2級以上 Above Grade 2 | 5級以上 Above Grade 5 | 水洗10次·耐水壓4級以上 10 times washing, grade 4 of water resistance | 外觀無變化 No change | 200 g/cm以上 Above 200g/cm |
| Ⅲ | 3級以上 Above Grade 3 | 3級以上 Above Grade 3 | 水洗5次·耐水壓3級以上 5 times washing, grade 3 of water resistance | 外觀無變化 No change | 200 g/cm以上 Above 200g/cm |
| Ⅳ | 2級以上 Above Grade 2 | 4級以上 Above Grade 4 | 水洗10次·耐水壓3級以上 10 times washing, grade 3 of water resistance | 外觀無變化 No change | 200 g/cm以上 Above 200g/cm |
| Ⅴ | 4級以上 Above Grade 2 | 2級以上 Above Grade 2 | 水洗5次·耐水壓2級以上 5 times washing, grade 1 of water resistance | | 200 g/cm以上 Above 200g/cm |
| Ⅵ | 2級以上 Above Grade 2 | 3級以上 Above Grade 3 | 水洗5次·耐水壓2級以上 5 times washing, grade 2 of water resistance | | 200 g/cm以上 Above 200g/cm |
| Ⅶ | 2級以上 Above Grade 4 | 2級以上 Above Grade 2 | 水洗5次·耐水壓1級以上 5 times washing, grade 2 of water resistance | 外觀無變化 No change | 200 g/cm以上 Above 200g/cm |

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FTTS-FA-006



FTTS-FA-006 防黴性紡織品 Antifungal Textiles



用語解釋 Terminology :

防黴加工 Antifungal treatment :

係指紡織品經加工處理來減少黴菌在製品上生長之目的。

A finishing treatment aiming at inhibiting the growth of fungi on textile.

成長面積比率 Area of fungi growth (%) :

係指試驗黴菌在樣品表面上所生長的面積之百分比。

Percentage of fungi growth area on the surface of inoculated tested sample.

參考標準 Referenced Standard :

- AATCC30-1999
Antifungal Activity, Assessment on Textile Materials: Mildew and Rot Resistance of Textile Materials
- AATCC 135-2001
Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics
- ASTM G21-1990
Determining Resistance of Synthetic Polymeric Materials to Fungi
- JIS Z2911-2000
Methods of Test Fungus Resistance
- CNS 2690 L 3063-1975
Method of Test for Mold-Proof of Textile Products

適用範圍 Scope :

本測試方法適用於各種紡織品之防黴性能檢驗。

These criteria are applicable to the evaluation and testing of antifungal activity of textile.

等級標準 Performance specification :

判定 Criteria :

必須經由合格測試實驗室測試通過可耐50、20、10或5次水洗或無需水洗對4株試驗菌種或對鬚髮癬菌在測試樣本上成長面積比率評級為C級(含)以上。方符合本項防黴性紡織品驗證規範。

In order to meet the requirement set forth in FTTF-FA-006, textile must achieve an antifungal activity level, expressed by area of fungal growth (%), of grade C or above on 4 specified test organisms or on Trichophyton metagrophytes (ATCC 9533) after being washed for 50, 20, 10 or 5 cycles by an approved lab (no washing is required in the case of disposable products).

耐水洗性要求 Washing requirement

| 類型 Type | 水洗次數 Washing cycles |
|---------|-----------------------------------------------------------------------------|
| I | 耐水洗50次後之防黴等級 Antifungal activity after 50 washing |
| II | 耐水洗20次後之防黴等級 Antifungal activity after 20 washing |
| III | 耐水洗10次後之防黴等級 Antifungal activity after 10 washing |
| IV | 耐水洗 5 次後之防黴等級 Antifungal activity after 5 washing |
| V | 無需水洗(一次使用拋棄式) Antifungal activity without washing (for disposable products) |

防黴效果分級 Classification of antifungal activity

| 黴菌在樣本上成長的面積(%) Area of fungi growth on specimens (%) | 等級 Grade | 評價 Classification |
|------------------------------------------------------|-----------|-------------------|
| 無成長 No growth, None | A A A A A | 優良 Excellent |
| 成長面積比率 Growth area \leq 10 | A A A | 好 Good |
| 10 < 成長面積比率 growth area \leq 30 | A | 尚可 Fair |

毒性測試 Toxicity test :

申請者必須檢附防黴劑對皮膚刺激性(PII值 < 2)或過敏性(陰性)之動物實驗報告和急性經口毒性報告—小鼠 > 1000mg/kg 無死亡和異常現象之第三者實驗室報告正本，亦或是原料廠商所提供之第三者檢驗報告副本及保證書。

The applicant must enclose an animal test report of dermal irritation test (PII primary irritation index < 2) or allergenic test (negative) in addition to an acute oral toxicity test report (LD50 in mice > 1000mg/kg, no mortality nor abnormal symptom) for the antifungal finishing reagent applied to the treated textiles. The test reports must be issued by third party labs and must be originals. This requirement can also be fulfilled by enclosing a guarantee letter and duplicates of test reports (issued by the third party) provided by antibacterial finishing reagent suppliers.

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FTTS-FA-007



FTTS-FA-007 防縐紡織品 Wrinkle Free Textiles

用語解釋 Terminology :

SA :
布面平整外觀。
Smoothness Appearance

CR :
摺痕保持性。
Crease Retention

SS :
縫跡平整外觀。
Seam Smoothness

適用範圍 Scope :

本標準適用於紡織、服飾產品經重複洗滌後，其抗起縐程度之評價標準及試驗法。

This criterion is applicable to the evaluation and testing of the smooth appearance of textile and apparel after repeated home laundering.

等級標準 Performance specification :

| 類型 Type | 水洗後布面外觀 Smooth Appearance after 5 Washing, SA | 水洗後摺痕保持性* Crease Retention after 5 Washing, CR | 水洗後縫跡外觀* Seam Smoothness after 5 Washing, SS | 游離甲醛含量 Formaldehyde content (ppm) |
|------------|-----------------------------------------------------|------------------------------------------------------|----------------------------------------------------|-----------------------------------------|
| I | $4.0 \leq SA \leq 5.0$ | $4.0 \leq CR \leq 5.0$ | $4.0 \leq SS \leq 5.0$ | 1 |
| II | $3.5 \leq SA < 4.0$ | $3.0 \leq CR < 4.0$ | $3.0 \leq SS < 4.0$ | 2 |
| III | $3.5 \leq SA < 4.0$ | $3.0 \leq CR < 4.0$ | $3.0 \leq SS < 4.0$ | 3 |
| IV | $3.0 \leq SA < 3.5$ | $3.0 \leq CR < 4.0$ | $3.0 \leq SS < 4.0$ | 3 |

* 若為成衣方須測試 It will be needed to test for apparel form only.

參考標準 Referenced Standard :

- AATCC 143-2001
Appearance of Apparel and Other Textile
End Products after Repeated Home
Laundering
- JIS L1041-2000
Test method for resin finished textile

水洗後布面外觀(水洗5次) Smooth Appearance after 5 washes

| 等級 Grade | 分類 Classification |
|------------------------|----------------------|
| $4.0 \leq SA \leq 5.0$ | 優 Excellent |
| $3.5 \leq SA < 4.0$ | 好 Good |
| $3.0 \leq SA < 3.5$ | 尚可 Fair |

水洗後摺痕保持性(水洗5次) Crease Retention after 5 washes

| 等級 Grade | 分類 Classification |
|---------------------|----------------------|
| CR = 5.0 | 優 Excellent |
| $4.0 \leq CR < 5.0$ | 好 Good |
| $3.0 \leq CR < 4.0$ | 尚可 Fair |

水洗後縫跡外觀(水洗5次) Seam Smoothness after 5 washes

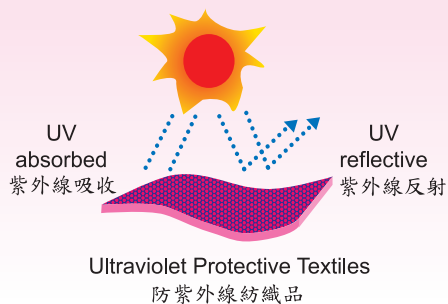
| 等級 Grade | 分類 Classification |
|---------------------|----------------------|
| SS = 5.0 | 優 Excellent |
| $4.0 \leq SS < 5.0$ | 好 Good |
| $3.0 \leq SS < 4.0$ | 尚可 Fair |

游離甲醛含量 Formaldehyde content

| 等級 Grade | 甲醛含量 Formaldehyde content | 分類 Classification |
|-------------|------------------------------|----------------------|
| 1 | ppm \leq 45 | 優 Excellent |
| 2 | 45 < ppm \leq 75 | 好 Good |
| 3 | 75 < ppm \leq 300 | 尚可 Fair |

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FTTS-FA-008



用語解釋 Terminology :

紫外線 A (solar UV-A) :

波長在315-400nm範圍的日光紫外線。
Solar ultraviolet radiation in the spectral range 315-400nm

紫外線 B (solar UV-B) :

波長在280-315nm範圍的日光紫外線。
Solar ultraviolet radiation in the spectral range 280-315nm

紫外線防護係數

UPF (Ultraviolet Protection Factor) :

無試樣下會使皮膚產生紅斑的紫外線量對有試樣下會使皮膚產生紅斑的紫外線量之比。

the ratio of the erythral spectral effectiveness calculated for the unprotected skin to the erythral spectral effectiveness calculated for skin protected by the test fabric.

參考標準 Referenced Standard :

- CNS 15001 L 1035
防日光紫外線織物性能評估
- AS / NZS 2604-1998
Sunscreen Products - Evaluation and classification
- AS / NZS 4174-1994
Synthetic shade cloth
- AS / NZS 4399-1996
Sun protective clothing-Evaluation and classification
- ISO 6330
Textiles-Domestic washing and drying procedures for textile testing
- BS EN 13758-2:2003
Textiles-Solar UV protective properties-Part2:classification and making of apparel

FTTS-FA-008

防紫外線紡織品

Ultraviolet Protective Textiles

適用範圍 Scope :

本標準規定防日光紫外線紡織品、衣物及其它服飾品(如帽子)之防紫外線係數性能評估、防護性服裝所需具備的基本需求之評價標準及試驗方法(不適用於非來自日光之紫外線)。

This standard specifies the ultraviolet coefficient performance evaluation, and the basic requirement of the standards and test methods evaluation for protective clothing (does not apply to non-from YV sunlight) for anti-solar ultraviolet textiles, clothing and other apparel items (such as hats).

等級標準 Performance specification :

| 紫外線防護係數 UPF | 紅斑紫外線穿透率 Erythral ultraviolet penetration rate (%) | 等級 Grade | 分類 Classification |
|----------------|-------------------------------------------------------|-------------|----------------------|
| 40 - 50、50+ | ≤ 2.5 | A | 優 Excellent |
| 25 - 39 | 2.6 ~ 4.1 | B | 很好 Very Good |
| 15 - 24 | 6.7 ~ 4.2 | C | 好 Good |

註 1 Note 1 :

[耐用性]

以 CNS15001 試驗條件洗滌。

[Washing durability]

washed based on CNS15001. Recommended number of.

[建議水洗次數]

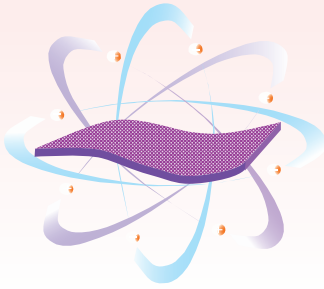
需水洗者(標誌類型 I)為20次,若主張水洗次數超過20次者則由廠商自行要求(原則為5的倍數,即25、30、35、40等等);無需水洗者(標誌類型 II)為0次。水洗次數必須註明於標誌上。

[Washing cycles]

the sample submitted to apply for type I label needs to be washed for 20 cycles. If the applicant claims that the functional properties of its product can withstand more than 20 washing cycles, then the number of washing cycles should follow the applicant's request (this number must be a multiple of 5, such as 25, 30, 35, 40, etc.). For samples submitted to apply for type II label, washing is not necessary. Furthermore, the number of washing cycles must be noted on the label of Taiwan Functional Textiles.

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FTTS-FA-009



用語解釋 Terminology :

絕緣素材 Insulative Material :

材料的表面電阻(Surface resistance) $> 1 \times 10^{11} \Omega$ ·
或表面電阻率(Surface resistivity) $> 1 \times 10^{12} \Omega/\text{cm}^2$ ·
surface resistance $> 1 \times 10^{11} \Omega$ or surface
resistivity $> 1 \times 10^{12} \Omega/\text{cm}^2$

靜電消散素材 Static Dissipative Material :

材料的表面電阻介於 $1 \times 10^4 \Omega$ 與 $1 \times 10^{11} \Omega$ 之間 · 或
表面電阻率介於 $1 \times 10^5 \Omega/\text{cm}^2$ 與 $1 \times 10^{12} \Omega/\text{cm}^2$ 之間 ·

$1 \times 10^4 \Omega < \text{surface resistance} < 1 \times 10^{11} \Omega$; or
 $1 \times 10^5 \Omega/\text{cm}^2 < \text{static resistivity} < 1 \times 10^{12} \Omega/\text{cm}^2$

參考標準 Referenced Standard :

- JIS L1094
Testing Methods for Electrostatic Propensity of Woven and Knitted Fabrics
- AATCC 76
Electrical Resistivity of Fabrics
- FTM STD 101C, Method 4046
Electrostatic Properties of Materials
- ESD STM2.1
ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Item

FTTS-FA-009 抗靜電紡織品 Antistatic Textiles

適用範圍 Scope :

適用任何形式紡織品 · 包括梭織物、針織物、塗佈/貼合織物及非織物等。如有必要前述紡織品須經水洗方式重複洗滌與耐氣候試驗 · 考量其抗靜電效果的耐洗性。

This criterion is applicable to textiles in all forms, including woven, knitted, coated/laminated fabric and nonwoven. To consider the durability, the pretreatment, ex:repeated laundering, weathering, may be required.

等級標準 Performance specification :

· 本規範等級與分類 Grade and Classification based on this specification

| 摩擦帶電壓 (伏特, V) Frictional charge (V) 針織物/梭織物 Knitted / Woven 經向與緯向 warp and weft | 等級 Grade | 分類 Classification |
|---------------------------------------------------------------------------------------|----------|-------------------|
| $V < 100$ | 3 | 優 Excellent |
| $100 \leq V < 500$ | 2 | 好 Good |
| $500 \leq V < 1000$ | 1 | 尚可 Fair |
| 表面電阻 (歐姆, Ω) Surface resistance (Ω) | 等級 Grade | 分類 Classification |
| $1 \times 10^4 \leq \Omega < 1 \times 10^6$ | 3 | 優 Excellent |
| $1 \times 10^6 \leq \Omega < 1 \times 10^9$ | 2 | 好 Good |
| $1 \times 10^9 \leq \Omega < 1 \times 10^{12}$ | 1 | 尚可 Fair |
| 靜電消散 (秒, S) Decay time (Second) | 等級 Grade | 分類 Classification |
| $S < 0.01$ | 3 | 優 Excellent |
| $0.01 \leq S < 0.5$ | 2 | 好 Good |
| $0.5 \leq S < 2$ | 1 | 尚可 Fair |

· 一般要求 General requirement for pretreatment

| 項目 Item | 一般要求 General Requirement | 依據標準 Test Method |
|-------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 耐水洗性 Washing Durability | 分為現狀、水洗20次、水洗50次三種 層級 (註1) Tested in original state, after 20 washes, 50 washes (refer to note 1) | (A) 梭織物、塗佈/貼合織物及非織物等以AATCC 135 (1) III (A) ii法。針織物以AATCC 135 (2) III (A) ii法。 (註2) (B) 按照JIS L0217 - 103試驗方法 (註2) (A) woven, coated/laminated fabric and non-woven fabric: washed based on AATCC 135 (1) III(A)ii; knitted: washed based on AATCC 135 (2) III(A)ii (refer to note 2) (B) washed based on JIS L0217-103 (refer to note 2) |

註1：耐水洗性除了上述三種層級之外，可依客戶需求而定。

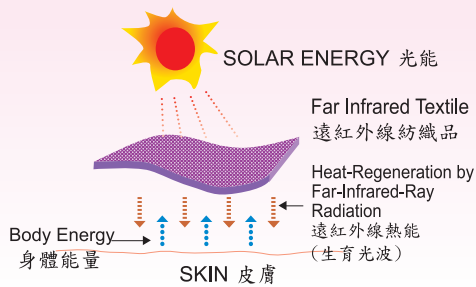
註2：表面電阻與靜電消散試驗之水洗採用AATCC 135方法，摩擦帶電壓試驗之水洗採用JIS L0217 - 103方法。

Note 1 : The treatment of washing durability may be varied upon agreement.

Note 2 : The washing condition for Surface resistance and Decay time test should be based on AATCC 135; the washing method for Frictional charge test should be based on JIS L0217-103.

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FTTS-FA-010



用語解釋 Terminology :

遠紅外線紡織品係指具有吸收再放射光譜波長範圍在2-22 μm 之紡織品。

Far Infrared Textiles :

Textiles capable of absorbing and re-radiating light waves with the wavelength of 2-22 μm .

參考標準 Referenced Standard :

- 日本遠紅外線協會
Japan Far Infrared Association.

FTTS-FA-010 遠紅外線紡織品 Far Infrared Textiles

適用範圍 Scope :

醫療用纖維製品及其半成品之外。

This criterion is applicable to textiles except fibrous products and semiproducts for medical use.

等級標準 Performance specification :

遠紅外線附加加工法分為原料混合加工、塗佈、貼合及含浸加工等。因考量原料混合加工製品具有與原纖維同等之耐久性，故不需進行耐洗濯特性之測試。塗佈、貼合及含浸加工則須先進行耐洗濯性之測試，測試方法依據AATCC 135 (1) (III) (A) 法洗滌10次。再進行常溫中遠紅外線纖維製品之機能性測試，其合格標準如表1。

The far infrared textile processing includes mixing of raw materials, coating, lamination and padding. As products made by mixing of raw materials deliver the same durability as the fiber, the washresistancetest would not be necessary. Products come of coating, laminating and padding processes will have to undergo the 10-time wash-resistance test based on AATCC 135 (1) (III) (A) prior to conducting the performance test. The performance test is conducted at ambient temperature and the criteria are given below :

表 1. 合格標準 Qualification

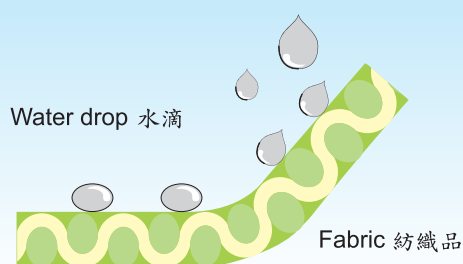
| 測試項目 Evaluation | 合格標準 Qualification |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 遠紅外線特性 Far Infrared Characteristics | 遠紅外線分光放射率 Far Infrared Spectral Emissivity : 以遠紅外線分光放射光譜儀測定，在2-22 μm 的波長領域中，其穩定放射率超過0.80以上。 The average emissivity of light waves with the wavelength of 2-22 μm is not less than 0.80, as measured by Far-Infrared spectrophotometer. |
| | 再放射特性 Re-radiating Characteristics : 測試樣品與對照樣品之溫度差達+0.5 $^{\circ}\text{C}$ 以上，並且有效差異值優於信賴界限95%。 Difference in temperature between the test sample and reference sample is not less than + 0.5 $^{\circ}\text{C}$ and the effective difference is better than the reliable limit of 95% |
| 保溫特性 Temperature Characteristics | 溫度記錄器 Thermograph / 熱顯像偵測儀 Monitor Test : 指定部位穿著測試樣品與對照樣品前後之平均皮膚溫度差達+0.5 $^{\circ}\text{C}$ 以上。 Difference in average skin temperature of specific body part while wearing test sample as opposed to wearing reference sample is not less than +0.5 $^{\circ}\text{C}$. |

表 2. 範圍 Scope

| 類型 Type | 要求範圍 Scope of the requirements |
|---------|------------------------------------------------------------------------------------------------------------------|
| A | 通過遠紅外線特性合格標準 Qualified standard by passing far infrared characteristics. |
| A+ | 通過遠紅外線特性及保溫特性合格標準 Qualified standard by passing far infrared characteristics and temperature characteristics. |

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FTTS-FA-011



用語解釋 Terminology :

潑水性 Water repellency :

係指紡織品表面抵抗水沾濕的特性。
the characteristic of textile to resist surface wetting.

FTTS-FA-011

潑水紡織品

Water Repellent Textiles

適用範圍 Scope :

本標準規定潑水紡織品之評定及試驗法，適用於經潑水加工處理之紡織品；但不適用於測定其抗水滲透性。

This criterion defines the evaluation and testing of water repellent textiles. It is applicable to textiles with water-repellent finishes. However it is not intended to measure the water penetration resistance of textile.

等級標準 Performance specification :

| 類型 Type | 水洗條件 Washing Condition | | | 參考用途 Usage Reference |
|------------|------------------------|---------------------------------|---------------------------------|--------------------------------------|
| | 現狀 As Received | 水洗10次 After 10 times washing | 水洗20次 After 20 times washing | |
| I | 90 (含) 以上 Above 90 | — | 80 (含) 以上 Above 80 | 耐用性潑水紡織品 Durable Water Repellency |
| II | 90 (含) 以上 Above 90 | 80 (含) 以上 Above 80 | — | 耐用性潑水紡織品 Durable Water Repellency |
| III | 90 (含) 以上 Above 90 | — | — | 一般性潑水紡織品 Normal Water Repellency |

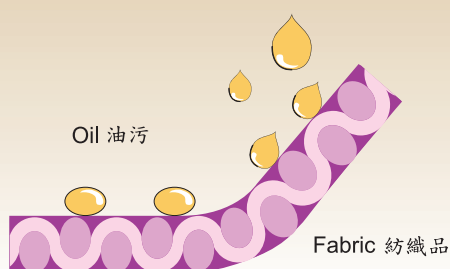
參考標準 Referenced Standard :

- CNS 10461 L3202-1983
纖維製品防水性檢驗法-噴灑試驗
Water Resistance Test Method for Textile Product Spray Test
- AATCC 22-2001
Water Repellency : Spray Test
- AATCC 135-2003
Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics
- ISO 4920-1981
Textile fabrics- Determination of resistance to surface wetting (Spray test)



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FTTS-FA-012



用語解釋 Terminology :

撥油性 Oil repellency :

應用於紡織工程方面，係指紡織品抗拒油液潤濕之特性。

the characteristic of textiles to resist wetting by oily liquids.

撥油指數 Oil repellency grade :

以不同表面張力的系列碳氫化合物試液，無法潤濕織物表面之最高數值。

the numerical value of the highest-numbered hydrocarbon testing liquid that will not wet the textiles.

參考標準 Referenced Standard :

- **CNS 11308 L 3217-2012**
織物撥油性檢驗法
Test Methods for Oil Repellency of Textiles
- **AATCC 118-2013**
Oil Repellency : Hydrocarbon Resistance Test
- **CNS 15140 L3263-2007**
紡織品試驗之家庭洗滌及乾燥程序
family washing and drying procedures of textiles testing
- **ISO 14419 -2010**
Textiles-Oil repellency-Hydrocarbon resistance test



FTTS-FA-012 撥油紡織品 Oil Repellent Textiles

適用範圍 Scope :

本標準規定撥油紡織品之評定及試驗法，適用於經氟化合物撥油劑或表面活化能低之撥油劑所整理加工之紡織品。

This criterion defines the evaluation and testing of oil repellent textiles. It is applicable to textiles finished with fluorochemical or other compounds capable of imparting low activation energy to textile surface.

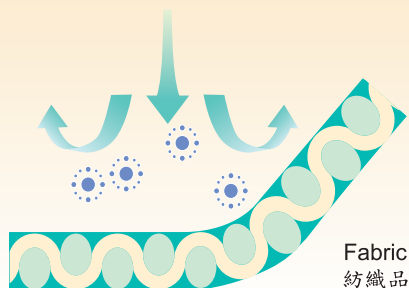
等級標準 Performance specification :

| 類型 Type | 水洗條件 Washing Condition | | |
|------------|------------------------|---------------------------------|-----------------------------------|
| | 現狀 As Received | 水洗10次 After 10 times washing | 參考用途 Usage Reference |
| I | 5 (含)以上 Above 5 | 3 (含)以上 Above 3 | 耐用性撥油織物 Durable Oil Repellency |
| II | 5 (含)以上 Above 5 | — | 一般性撥油織物 Normal Oil Repellency |



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FTTS-FA-013



Fabric
紡織品

用語解釋 Terminology :

易去污 Stain release :

指被沾污部位經洗滌後，其外觀與原來未被沾污的比較，沾污被洗除的效果。

the degree to which a stained substrate approaches its original, unstained appearance as a result of a care procedure.

FTTS-FA-013

易去污紡織品

Stain Release Textiles

適用範圍 Scope :

本標準規定易去污紡織品之評定及試驗法，適用於評估紡織品經家庭式洗滌後，紡織品上之沾污可被洗除的能力。

This criterion defines the evaluation and testing of stain release textiles. It is applicable to measuring the ability of textile to release stain after home laundering.

等級標準 Performance specification :

水洗前測試易去污，結果必須符合易去污級數3.5級（含）以上之要求。

經 CNS 15140 B法方法洗滌20次後，測試易去污，結果必須符合易去污級數3級（含）以上之要求。

參考標準 Referenced Standard :

- AATCC 130
Soil Release: Oily Stain Release Method
- AATCC 135
Dimensional Changes in Home Launderings
- AATCC 124
Appearance of Fabrics after Repeated Home Launderings
- CNS 15140 L3263
紡織品試驗之家庭洗滌及乾燥程序
Home Laundering and drying procedures for
Textile Testing

| 要求條件 Requirement | 等級 Grade |
|-------------------------|----------------------------|
| 現狀 Present situation | 3.5 級以上 Above grade 3.5 |
| 耐用性 Durability | 3 級以上 Above grade 3.5 |

註 1 Note 1 :

水洗必須符合CNS 15140 B法，因考量耐久性因素，需經過20次的水洗。

Washing condition should be based on CNS 15140,B and test sample must undergo 20 washing cycles for durability consideration.



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FTTS-FA-015



用語解釋 Terminology :

點火時間 Ignition time :

自火源點火接觸試樣起，至停止接觸的時間。

The time for which the igniting flame is applied to a material.

餘焰時間 After-flame time :

自點火時間終了起，試樣上火焰繼續燃燒的時間。

The length of time for which a material continues to flame, under the specified test conditions, after the ignition source has been removed (also called duration of flame).

餘燼時間 After-glow :

自試樣上火焰消失起至停止燃燒的時間。

Persistence of glowing combustion of a material under specified test conditions, after cessation of flaming or, if no flaming occurs, after removal of the ignition source.

餘燃時間 After-glow time :

自點火時間終了起，至試樣停止燃燒的時間。

The time for which a material continues to afterglow, under specified test conditions after cessation of flaming or after removal of the ignition source, ignoring glowing debris.

炭化面積 Carbonized area :

炭化部份的面積。

The area of carbonized section.

炭化距離 Carbonized distance :

炭化部份的最大長度。

The largest length of carbonized section.

FTTS-FA-015

防焰紡織品

Flame-Resistant Textiles

適用範圍 Scope :

本標準適用規定防焰紡織品之評定及試驗法，適用於評估一般衣著、兒童睡衣和其他衣著，以及壁布、家飾布、窗簾、布幕、帳篷等的防焰性能。

These criteria define the evaluation and testing of flameresistant textiles. The are applicable to general apparel, children sleepwear and other wearing applications. Fabrics for curtains, drapes, walls, covers for upholstered furniture and camping tentage can also be evaluated by these criteria.

等級標準 Performance specification :

| 類型 Type | 等級 Rating | 平均燃燒速度 Average Burning Speed (Second) | |
|-------------------------------|--------------|---------------------------------------|--------------------------------------------------------------------------------|
| | | 非起毛織物 Non-Brushed fabric | 起毛織物 Brushed fabric |
| I 一般衣著類 General apparel | Class 1 | 4 秒以上 over 4 | 超過7秒或0~7秒但底布無著火、無熔融 over 7 or Less than 7 without base burnt and no melting |
| | Class 2 | — | 4~7秒且底布著火、熔融 4-7 with base burnt and melting |

註：參照 CPSC 16 CFR Part 1610

Remark : Refer to CPSC 16 CFR Part 1610

| 類型 Type | 等級 Rating | 炭化距離 Carbonized Distance (cm) | |
|----------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| | | 個別 Individual | 平均 Average |
| II 兒童睡衣類 Childrensleepwear | 符合 Acceptable | 皆小於25.4cm(10in)；或加測後仍僅有1片等於 ·其他皆小於25.4cm(10in) Less than 25.4 (10.0 in) or only 1 piece from the additional tested specimen equal to 25.4, the others less than 25.4 (10.0 in) | 17.8cm(7.0in)以下 Less than 17.8 (7.0 in) |

註：參照 CPSC 16 CFR Part 1615/1616

Remark : Refer to CPSC 16 CFR Part 1615/1616

| 類型 Type | 等級 Rating | 布重450g/m ² 以下者 (A-1法) Applicable to fabric weight less than 450g/m ² (Method A-1) | | | |
|--------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------|---------------------------------|
| | | 炭化面積(cm ²) Carbonized area | 餘焰時間(秒) After-flame time (s) | 餘燃時間(秒) After-glow time (s) | 炭化距離(cm) Carbonized distance |
| III 其他類* / 台灣 Others* / Taiwan | 點火 1 分鐘 1 minute Ignition | | | | |
| | Class 1 | 30以下 Less than | 3 以下 Less than | 5 以下 Less than | 20 以下 Less than |
| | Class 2 | 45以下 Less than | 3 以下 Less than | 5 以下 Less than | 超過 Over 20 |
| | 著火 3 秒後 3 seconds after-flame | | | | |
| | Class 1 | 30以下 Less than | 3 以下 Less than | 5 以下 Less than | 20 以下 Less than |
| | Class 2 | 45以下 Less than | 10 以下 Less than | 15 以下 Less than | 超過 Over 20 |

註：參照CNS 10285 L3196A-1法

Remark : Refer to CNS 10285 L3196 Method A-1



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| 類型 Type | 等級 Rating | 布重超過 450 g/m ² 者 (A-2法) Applicable to fabric weight more than 450g/m ² (Method A-2) | | | |
|-------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------|---------------------------------|
| | | 炭化面積(cm ²) Carbonized area | 餘焰時間(秒) After-flame time (S) | 餘燃時間(秒) After-glow time (S) | 炭化距離(cm) Carbonized distance |
| III 其他類* / 台灣 Others*/ Taiwan | | 點火 2 分鐘 2 minute Ignition | | | |
| | Class 1 | 40以下 Less than | 5 以下 Less than | 20 以下 Less than | 20 以下 Less than |
| | Class 2 | 60以下 Less than | 5 以下 Less than | 20 以下 Less than | 超過 Over 20 |
| | | 著火 6 秒後 6 seconds after-flame | | | |
| | Class 1 | 40以下 Less than | 5 以下 Less than | 20 以下 Less than | 20 以下 Less than |
| | Class 2 | 60以下 Less than | 20 以下 Less than | 30 以下 Less than | 超過 Over 20 |

註：參照CNS 10285 L3196A-2法 Remark : Refer to CNS 10285 L3196 Method A-2

| 類型 Type | 等級 Rating | 布重 (g/m ²) Fabric weight | 個別餘焰 時間(秒) Individual After- flame time(S) | 平均餘焰 時間(秒) Average After- flame time(S) | 個別炭化 距離(mm) Individual Carbonized distance | 平均炭化距離 (mm)(質量減損率) Average Carbonized distance (mm) (weight Loss %) |
|-------------------------------------------|------------------|-----------------------------------------|-----------------------------------------------------|--------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------|
| IV 其他類* / 美國 Others* / U.S.A. | 符合 Acceptable | 大於 Over 340 | 4 | 2 | 255 | 115 |
| | | 270-340 | | | 255 | 140 |
| | | 200-270 | | | 255 | 165 |
| | | 135-200 | | | 255 | 190 |
| | | 50-135 / 100 以下Less than # | | | 255# | 215 # (5%以下Less than) |
| | | 50 以下Less than # | | | 255# | 230 # (5%以下Less than) |

註：參照 CPAI-84 Sec.6 Remark : Refer to CPAI-84 Sec.6

| 類型 Type | 等級 Rating | 火焰 蔓延速率 (mm/s) Spreading speed | 餘焰時間(秒) After-flame time(S) | 餘燻時間(秒) After-glow (S) | 炭化距離(mm) Carbonized distance | 熔滴現象 Melting drop |
|--------------------------------------------------------------------|------------------|--------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------|------------------------------------|-------------------------|
| V 其他類* / 歐盟或國際 Others* / Europe or international | 符合 Acceptable | 0 | 未水洗 3 以下 · 水洗後 20 以下 Less than 3 without washing, less than 20 after washing. | 25以下 Less than 25 | 150以下 Less than 150 | 無 None |

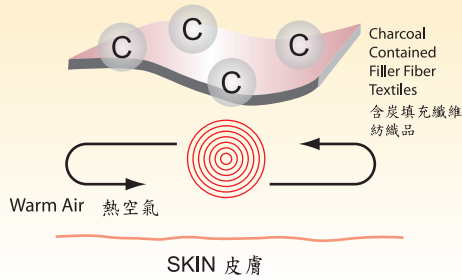
註：參照EN 1103 (僅衣著)、ISO 6941及瑞士官方規定Brennbarkeitsverordnung · BrbV817.043.1
Remark : Refer to EN 1103 (Apparel only), ISO 6941 and Brennbarkeitsverordnung, BrbV 817.043.1

參考標準 Referenced Standard :

- CPSC 16 CFR Part 1610
Flammability of Clothing Textiles
- CPSC 16 CFR Part 1615/1616
Flammability of Children's Sleepwear
- AATCC 135
Dimensional Changes in Home Launderings
- AATCC 124
Appearance of Fabrics after Repeated Home Launderings
- CNS 10285 L3196
纖維製品防焰性試驗法
Test Methods for Flame Resistance of
Textiles
- 內政部防焰性能試驗基準
Standard Test Methods for Flame
Resistance (stipulated by MINISTRY OF THE
INTERIOR)
- CNS 8038 L3138
織物收縮率檢驗法 Test Methods for
Dimensional Changes of Textiles
- CPAI-84
A Specification for Flame-Resistant
Materials Used in Camping Tentage
- EN 1103
Detailed Procedure to Determine the
Burning Behaviour of Fabrics for Apparel
- ISO 6941
Measurement of Flame Spread Properties of
Vertically Oriented Specimens
- EN 26330 (ISO 6330-1984)
Domestic Washing and Drying Procedures
for Textile Testing
- 瑞士官方規定 (Swiss official regulation)
Brennbarkeitsverordnung, BrbV817.043.1

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FTTS-FA-016



FTTS-FA-016

保暖性含炭填充纖維紡織品

Charcoal Contained Filler Fiber Textiles for Warmth Retention

用語解釋 Terminology :

保暖性含炭填充纖維紡織品係指運用含有炭成分合成纖維作為填充材之產品，包括寢具類之棉被、枕頭及鋪棉床罩組件等，以及服飾類之鋪棉衣著褲裝等，以保暖機能為其特性訴求者。

"Charcoal-containing filler fiber textiles for warmth retention" refer to the products that claim warmth-retaining effects through the incorporation of charcoal-containing synthetic fibers as fillers, including various bedding products such as quilts, pillows and quilted bedspreads as well as various clothing products such as quilted jackets and quilted pants.

參考標準 Referenced Standard :

- CNS 2339 L3050
纖維混用率試驗法
Method of Test for Mixing Ratio of Fibers Mixtures
- FTTS-FA-010
遠紅外線紡織品驗證規範
Certification Standard for Far Infrared Textiles

備考 Note :

委測者須同時提供未含炭填充纖維並具有與受測樣本相同等級、成份與組織結構之試樣作為對照樣品。

The applicant must also provide a non-charcoal-containing filler fiber as the control specimen. The grade, composition and structure of the control specimen must be the same as those of the test specimen.

適用範圍 Scope :

本規範適用於以含炭合成纖維為填充材的產品，並以保暖性為特性訴求者，包括寢具類之棉被、枕頭及鋪棉床罩組件等，以及服飾類之鋪棉衣著褲裝等。

This criterion is applicable to the evaluation and testing of products that use charcoal-containing synthetic fibers as fillers and claim warmth retention as a major feature, including various bedding products such as quilts, pillows and quilted bedspreads as well as various clothing products such as quilted jackets and quilted pants

等級標準 Performance specification :

類型A：含炭填充纖維紡織品通過遠紅外線特性合格標準：

Type A : Charcoal-containing filler fiber textiles that meet the qualification requirements for Far Infrared features.

| 測試項目 Evaluation | 合格標準 Qualification Requirements |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 含炭定性分析 Qualitative Analysis of Charcoal Content | 以CNS 2339 L3050纖維混用率試驗法處理纖維樣本，將合成纖維部分予以溶解，收集不溶物以SEM-EDX或顯微拉曼光譜儀觀測，可檢出含有碳元素者。 Treat the fiber specimen based on CNS 2339 L3050 (Method of Test for Mixing Ratio of Fibers Mixtures). Dissolve the synthetic components of the fiber. Collect the insoluble objects and observe them via SEM-EDX or micro-Raman spectroscopy; the element carbon could be found. |
| 遠紅外線特性 Far Infrared Features | 以遠紅外線分光放射光譜儀測定，在2~22μm內之波長領域，其穩定平均放射率超過0.80以上 The stable average emissivity of light waves with the wavelength of 2~22 μm is not less than 0.80 as measured by Far Infrared spectrophotometer. |
| 溫升特性 Temperature-Increasing Feature | 測試樣品與對照樣品之溫度差達+2.0°C以上 Difference in temperature between the test specimen and the control specimen is not less than +2.0°C. · 須同時符合上述標準 Must meet all requirements outlined above |

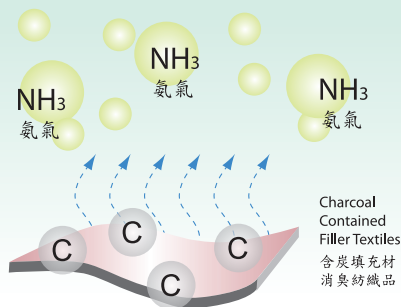
類型A+：必需通過遠紅外線特性及溫度特性合格標準：

Type A+ : Charcoal-containing filler fiber textiles that meet the qualification requirements for Far Infrared features and warmth-retaining features.

| 測試項目 Evaluation | 合格標準 Qualification Requirements |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 保溫特性 Warmth retaining Features | 溫度記錄器 Thermograph 指定部位穿著測試樣品與對照樣品前後之平均皮膚溫度差達+0.5°C以上 Average difference in skin temperature of specific body part while wearing the test specimen as opposed to wearing the control specimen is not less than +0.5°C. 熱顯像偵測儀 Monitor Test · 須同時符合上述標準 Must meet all requirements outlined above |

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FTTS-FA-017



用語解釋 Terminology :

含炭填充纖維紡織品係指運用含有炭成分合成纖維作為填充材之產品，包括寢具類之棉被、枕頭及鋪棉床單組件等，以及服飾類之鋪棉衣著褲裝等。

消臭性為纖維與定量氨氣成分接觸後，可使氨氣量減少之特性。

Charcoal-contained filler fiber textiles refer to the products that use charcoal-contained synthetic fibers as fillers, including various bedding products such as quilts, pillows and quilted bedspreads as well as various clothing products such as quilted jackets and quilted pants.

Deodorization refers to the capability of a fiber to reduce the amount of ammonia when it is exposed to a fixed amount of ammonia.

FTTS-FA-017 含炭填充材消臭性紡織品 Deodorization for Charcoal Contained Filler Textiles

適用範圍 Scope :

本規範適用於含炭填充材之紡織品，並以氨氣消臭性為訴求者。

This criterion is applicable to the evaluation and testing of charcoal contained filler textiles that claim ammoniareducing effects.

等級標準 Performance specification :

含炭分析 Analysis of Charcoal Content :

依照FTTS-FA-016第3.1節方法，須檢出含有碳元素之含炭填充纖維。

Carbon element shall be found after treating the fiber specimen based on the method stipulated in Section 3.1 of FTTS-FA-016.

消臭性能 Deodorant Performance :

檢測試樣經2小時或24小時後之消臭率。

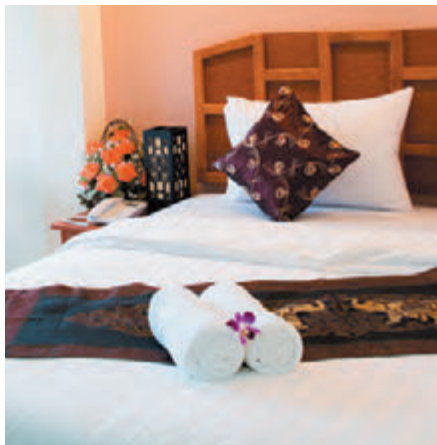
Test the percentage of odor reduction of the specimen after 2 or 24 hours.

產品等級 Rating

| 等級 Grade | 測試時間 Test Time (hour) | 氨氣之消臭率(%) Percentage of Ammonia Reduction (%) |
|-------------|--------------------------|--------------------------------------------------|
| A+ | 2 | ≥ 70 |
| A | 24 | ≥ 70 |
| B | 24 | ≥ 40 |

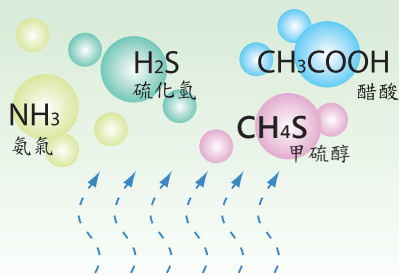
參考標準 Referenced Standard :

- 日本纖維評價技術協議會(JTETC)
消臭加工纖維製品認證基準
Japan Textile Evaluation Technology Council (JTETC)
Certification Standard for Deodorant Fibrous Products
- FTTS-FA-016
保暖性含炭填充纖維紡織品驗證規範
Charcoal-Contained Filler Fiber Textiles for Warmth Retention



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FTTS-FA-018



Fabric 紡織品

用語解釋 Terminology :

消臭性 Deodorization :

紡織品與定量臭氣氣體成分接觸後，使臭氣氣體量減少之特性。

The capability of a textile to reduce the amount of odor gas when it is exposed to a fixed amount of odor gas.

參考標準 Referenced Standard :

- CNS 803815140 L3263
紡織品試驗之家庭洗滌及乾燥程序
Domestic washing and drying procedures for textile testing
- ISO 17299 - 1
Textiles - Determination of deodorant property
Part 1: General principle
- ISO 17299 - 2
Textiles - Determination of deodorant property
Part 2: Detector tube method

FTTS-FA-018

異味去除(消臭)紡織品

Specified Requirements of Deodorized Textiles

適用範圍 Scope :

本標準適用於所有異味去除紡織品之檢知管試驗法，主要測試異味物質為氨、醋酸、甲硫醇和硫化氫。

This requirement applies to the detector tube method for all deodorized textiles, main substances tested include ammonia, acetic acid, methyl mercaptan and hydrogen sulfate.

等級標準 Performance specification :

異味去除性能 (檢知管法)

Deodorizing Performance (Detector Tube Method)

註：硫化氫為特殊需求，一般情形下不須測試，若廠商有特別要求時，再於報告中加註。

Note : Hydrogen Sulfide is only for special request not for general test. If it is tested by request, the result and method should be remarked on the report.

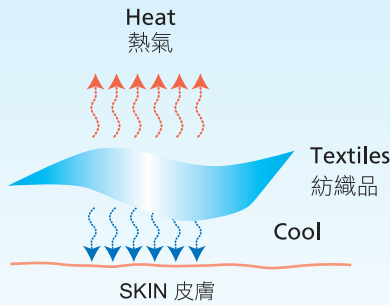
| 等級 Grade | 異味去除率 Deodorizing Percentage (%) | | | |
|-------------|----------------------------------|-------------------|-------------------------|-------------------------|
| | 氨氣 Ammonia | 醋酸 Acetic Acid | 甲硫醇 Methyl Mercaptan | 硫化氫 Hydrogen Sulfide |
| A | ≥ 70 | ≥ 70 | ≥ 70 | ≥ 70 |
| B | ≥ 50 | ≥ 50 | ≥ 50 | ≥ 50 |

備考 Remark :

若異味去除加工劑有安全性考量，申請者必須檢附加工劑之皮膚刺激性(PII值⁽¹⁾ < 2)或過敏性(無過敏反應)之動物實驗報告和產品中添加物之急性經口毒性LD₅₀ (老鼠在大於1000 mg/kg的劑量下，半數致死量)之認證實驗室報告正本。註⁽¹⁾: 初期刺激指數。

If deodorizing processing agent has safety considerations, applicant must include skin irritation (PII value⁽¹⁾ < 2) or allergic (no allergic reaction) animal test report of the processing agent, and product additive's acute oral toxicity LD₅₀ (half lethal dose for mice at dose > 1000 mg/kg) original report from approved labs. Note⁽¹⁾: primary irritation index.





用語解釋 Terminology :

q-max :

係使用儀器模擬試驗織物接觸人體時單位面積的最大熱量流失值 (瓦特/平方公分 · W/cm^2) · 可作為織物涼感性能指標。

It is that the maximum heat loss per unit (W/cm^2) when an instrument is used for simulating the textiles to touch the human body as a index of cool feeling.

參考標準 Referenced Standard :

- CNS 15687 織物瞬間涼感性能試驗法
Test Method for Cool Feeling Textiles

FTTS-FA-019 瞬間涼感紡織品 Cool Feeling Textiles

適用範圍 Scope :

本標準適用於測試具瞬間涼感之針、梭織等紡織相關製品，視其是否能達到散熱降溫程度，來判斷其及其半成品，以評估其是否具有涼感效果之品質要求。

The criterion is applicable to testing the cooling-feel of knitted and woven textile products for determining them and their semi-finished goods whether they possess the effect of a cooling feel.

等級標準 Performance specification :

本規範之評估合格標準：織物瞬間涼感(W/cm^2)：

The specification of the instant cool feeling on fabrics must be not less than

| 織物瞬間涼感流熱量(W/cm^2) | Maximum heat loss per unit (W/cm^2) |
|-----------------------|-----------------------------------------|
| 針織物 Knit | ≥ 0.130 |
| 梭織物 Weave | ≥ 0.170 |

一般要求 Washing requirement

| 項目 Item | 依據標準 Test method |
|----------------------------|-------------------------------------------------------------------------------------|
| 耐水洗性 Washing durability | 針織布依照CNS15140 8B洗程、柔和滾乾，進行水洗5次。 Washed based on CNS15140 8B for knitted fabrics. |
| | 梭織布依照CNS15140 7B洗程、柔和滾乾，進行水洗5次。 Washed based on CNS15140 7B for woven fabrics. |

註 1：耐水洗性除了上述二種層級之外，可依客戶需求而定。

Note 1: The treatment of washing durability may be varied upon agreement.

試驗結果 Report Results

· 試驗結果為5次測試數據的平均值。

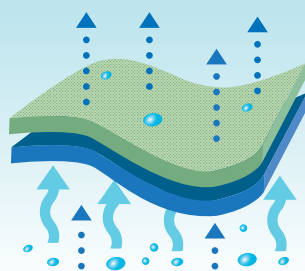
The average of 5 samples test data will be as the report result.

· 試驗報告有效數據為平均至小數點後第三位。

Report results in W/cm^2 rounding to the nearest thousandth.

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用語解釋 Terminology :

吸濕排汗織物 Wicking fabric :

織物具備吸收汗液並迅速傳導遠離皮膚，以保持皮膚表面乾爽舒適之機能。

a fabric that can absorb sweat and rapidly transfer the moisture away from the skin, a function that maintains the skin surface dry and comfortable.

綜合吸濕性能 OMMC :

織物對液態水之吸濕排汗能力的綜合表現。以織物吸收層之吸水速率、單向傳輸指數和吸收層之擴散速度的加權值表示。

overall performance of the fabric's wicking ability for liquids. It is expressed by weighted value of liquid moisture absorption rate of the fabric's absorption layer, one-way transmission index and rate of diffusion of absorption layer.

參考標準 Referenced Standard :

- AATCC 195-2010
Liquid Moisture Management Properties of Textile Fabrics

FTTS-FA-020

吸濕排汗速乾多層

Liquid Moisture Management Properties of Textile Fabrics

適用範圍 Scope :

本規範適用於吸濕排汗紡織服飾產品之能力評價，尤其適用於具有雙層或多層結構設計，形成傳導層（或隔離層）與吸收層之吸濕排汗紡織服飾產品其傳導隔離液態水分之評價標準及試驗方法。

This criterion is applicable for capacity assessment for wicking textile and apparel products, especially as evaluation criteria and test methods on conductivity and insulation of liquid moisture in double or multi-layered structure designed wicking textiles and apparel products, with conductive (or barrier) and absorption layers.

等級標準 Performance specification :

織物液態水分傳導性能之等級標準

Grading standards for liquid moisture transfer properties in fabrics.

| 等級 Grade | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------------|--------|--------|--------|--------|---------|
| 濕潤時間 Wetting Time (sec) * | ≥ 120 | ≥ 20 | ≥ 6 | ≥ 3 | < 3 |
| 吸水速率 Absorption Rate (%/sec) * | ≥ 0 | ≥ 10 | ≥ 30 | ≥ 50 | ≥ 100.0 |
| 最大擴散半徑 Maximum Wetting Radius (mm) * | ≥ 0 | ≥ 8 | ≥ 13 | ≥ 18 | ≥ 22.0 |
| 擴散速度 Spread Speed (mm/sec) * | ≥ 0.0 | ≥ 1.0 | ≥ 2.0 | ≥ 3.0 | ≥ 4.0 |
| 單向傳輸指數 One-way transmission index R (%) | < -50 | ≥ -50 | ≥ 100 | ≥ 200 | ≥ 400 |
| 綜合吸濕性能 OMMC | < 0.20 | ≥ 0.20 | ≥ 0.40 | ≥ 0.60 | ≥ 0.80 |

* 織物上層（使用時的貼身面）與底層（使用時的正面）分別均有分級，等級要求相同。等級5性能最好；等級1最差。

both the fabric's Top (next to skin surface during use) and Bottom (front surface during use) have respective classifications, and grading are required to be the same. Grade 5 has the best performance, while grade 1 has the worst.

標誌 Mark

| 類型 Type | 上層 Top | | 底層 Bottom | | 單向傳輸指數 One-way transfer index | 綜合吸濕性能 OMMC | 分類 Classification |
|---------|-------------------|-----------------------|-----------------------|-------------------|-------------------------------|-------------|-------------------|
| | 濕潤時間 wetting time | 吸水速率 absorption speed | 最大擴散半徑 maximum radius | 擴散速度 spread speed | | | |
| I | 5 | 5 | 5 | 5 | 5 | 5 | 優良 Excellent |
| II | 4 | 4 | 4 | 4 | 4 | 4 | 很好 Very Good |
| III | 3 | 3 | 3 | 3 | 3 | 3 | 好 Good |

註1：同組樣本之各項試驗等級，以最低值判定「類型」。

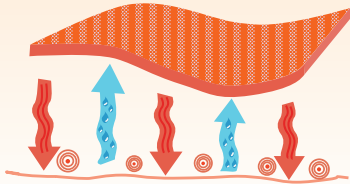
註2：上層濕潤時間、底層吸水速率、底層最大擴散半徑、底層擴散速度等4項評級特別適用於吸濕性之性能要求；單向傳輸指數之評級特別適用於排汗性之性能要求。

Note 1 : minimum value is used to determine "type" in each test grade of the same sample group.

Note 2 : the 4 grading of Top wetting time, Bottom absorption speed, Bottom maximum radius, Bottom spread speed are especially suitable for moisture absorption requirements.

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FTTS-FA-023



用語解釋 Terminology :

吸濕發熱

Generate heat by moisture absorption :

纖維材料吸附人體表面或空氣中的氣態水分子濕氣(濕氣)·使其凝結成液態水分子·而使紡織品溫度上升的現象。

the fiber material absorbs the gaseous water molecules from the body surface of the air moisture (humidity), condenses them into liquid water molecules, so that textile temperature rises.

參考標準 Referenced Standard :

- CNS 15140
紡織品試驗之家庭洗滌及乾燥程序
Household washing and drying procedures
for textile testing
- GB / T 29866-2013
紡織品吸濕發熱性能試驗方法
Test method for heat absorbing performance
textiles

FTTS-FA-023

吸濕發熱紡織品

Generating Heat-Textiles by Moisture Absorption

適用範圍 Scope :

本規範規定每平方米布重200公克以下輕薄保暖吸濕發熱紡織品之試驗方法。

This requirement specifies the test method for light, heat-retaining, heat-generating by moisture absorbing fabrics which weight less than 200 grams per square meter.

等級標準 Performance specification :

合格標準 Eligibility criteria :

30分鐘之平均升溫值($\Delta\bar{T}$) $\geq 0.8^{\circ}\text{C}$ ·且最高升溫值(ΔT_{\max}) $\geq 2.5^{\circ}\text{C}$ 。

Average heating value at 30 minutes ($\Delta\bar{T}$) $\geq 0.8^{\circ}\text{C}$, and highest heating value (ΔT_{\max}) $\geq 2.5^{\circ}\text{C}$

試樣準備 Sample preparation :

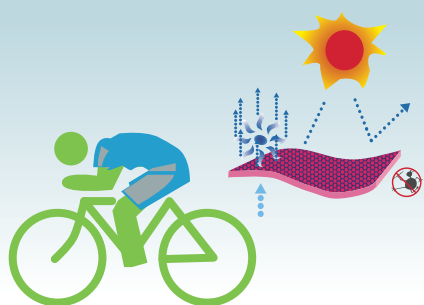
分為現狀、水洗20次及水洗50次三種。針織物水洗方法依CNS 15140 8B法規定·梭織物水洗方法依CNS 15140 6B法·或依買賣雙方約定之水洗方法與次數。

Divide into three types : normal , water washed 20 times and water washed 50 times three. Washing method of knitting is performed according to CNS 15140 8B regulations, woven fabric according to CNS 15140 6B regulations, or according to washing method and frequency agreed by both parties.



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FTTS-GA-024



FTTS-GA-024 運動用自行車衣 Cycling Clothing

適用範圍 Scope :

本規範規定運動用途之自行車衣基本品質與選擇性機能性能項目之評估標準及試驗方法。

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

等級標準 Performance specification :

• 基本品質之要求 Basic quality requirements

| 項次 No. | 項目 Item | 等級 Grade |
|--------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1 | 耐洗色牢度 Wash durability | 變褪色 Fade 4 級以上 Over grade 4 |
| | | 污 染 Pollution |
| 2 | 耐汗色牢度 Sweat durability | 變褪色 Fade 4 級以上 Over grade 4 |
| | | 污 染 Pollution |
| 3 | 耐光色牢度 Light durability | 4 級以上 Over grade 4 |
| 4 | 耐摩擦色牢度(白色除外) Friction durability (except for white) | 乾摩擦 Dry friction 4 級以上 Over grade 4 |
| | | 濕摩擦 Wet friction 3 - 4 級以上 Over grade 3-4 |
| 5 | 尺寸變化率(%) Textile size change(%) | 合成纖維及其混紡 : -5~+2% 以內 Synthesis fiber and hybrid fabric : -5~+2% |
| 6 | | 其他 : -8~+3% 以內 Others : -8~+3% |
| 7 | 鉤掛起絨性(適用於自行車上衣) Hook pilling (applicable to cycling clothing) | 3 級以上 Over grade 3 |
| 8 | 起絨性(適用於自行車褲) Pilling (applicable to cycling painting) | 4 級以上 Over grade 4 |
| 9 | 成衣縫合效率(%) Seam efficiency (%) | 80% 以上 Over 80% |
| 10 | 織物對水分擴散能力 (mm ²) Moisture diffusion (mm ²) | 900mm ² 以上 Over 900mm ² |
| 11 | 織物乾燥速率(%) Drying speed (%) | 35% 以下 Below 35% |
| 12 | 織物吸水速率-滴下法 (秒) Moisture absorption - drop (sec) | 2 秒以下 Below 2 sec |
| 13 | 織物吸水速率-蕊吸法 (mm) Moisture absorption - core absorption (mm) | 80mm 以上 Over 80mm |
| 14 | 織物伸長彈性率(彈性回復能力)(%) Elongation rate (rebound) (%) | 註明有彈性纖維之彈性布料者·伸長彈性率為 90% 以上 Note the elongation rate for the textiles with spring fiber over 90%. |

註1：功能性顏色如螢光、反光、或特殊色之各項色牢度依利害關係人之要求而定。

Note 1 : The functional color like fluorescence, light reflection or special color decided by the interested parties.

參考標準 Referenced Standard :

- CNS 15538
針織運動衣
Knitted sport clothing
- CNS 12475
梭織物及針織物鉤掛起絨試驗法
Test method of hook pilling for weaves and knits
- CNS 8040
梭織物及針織物起絨檢驗法
Test method of pilling for weaves and knits
- CNS 15659-1
紡織品吸濕速乾性能評估-第1部：組合試驗法
Assessment of textile moisture absorption - Part 1: Combination test method
- CNS 13752
針織布試驗法：6.15.2 B 伸長彈性率定載重法
Test method for knit: 6.15.2 Constant weight method of elongation rate
- CNS 15001
防日光紫外線織物性能評估
Assessment of UV protection textiles
- ISO 20743
Textiles - Determination of antibacterial activity of textile products 之8.1 Absorption method (菌液吸收法)
- CNS 14945
一般用途抗菌紡織品性能評估
Assessment of general-purpose antibacterial textiles



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· 機能要求 Functional Requirements

織物紫外線防護係數之要求 Requirement for UV protection textile :

分為現狀與20次水洗·水洗方式依(1)洗標；或(2) CNS 15140 表7 之8B 洗程·表3之(2)滾乾條件；或(3)依利害關係人之要求。
依CNS 15001 之規定·織物紫外線防護係數(UPF)之要求標準需達40 以上。

Classified as the current status and wash 20 times. The wash includes (1) wash label, or (2) 8B of Table 7, (2) of Table 3 in CNS 15140 or (3) decided by the interested parties.

The requirement for UV protection textiles must reach over 40 according to CNS 15001.

織物抗菌性之要求標準 Requirement for antibacterial textile :

分為現狀與20次水洗·水洗方式依(1)洗標；或(2) CNS 15140 表7 之8B 洗程·表3之(2)滾乾條件；或(3)依利害關係人之要求；洗劑依CNS 14945 之3.2 之(10)之規定。

依ISO 20743 之規定·抗菌活性值(金黃色葡萄球菌·肺炎桿菌)需達2.0 以上。

Classified as the current status and wash 20 times. The wash includes (1) wash label, or (2) 8B of Table 7, (2) of Table 3 in CNS 15140, or (3) decided by the interested parties or agent according to (10) of 3.2 in CNS 14945.

The antibacterial activity (staphylococcus aureus and streptococcus pneumoniae) must reach over 2.0 according to CNS 20743.

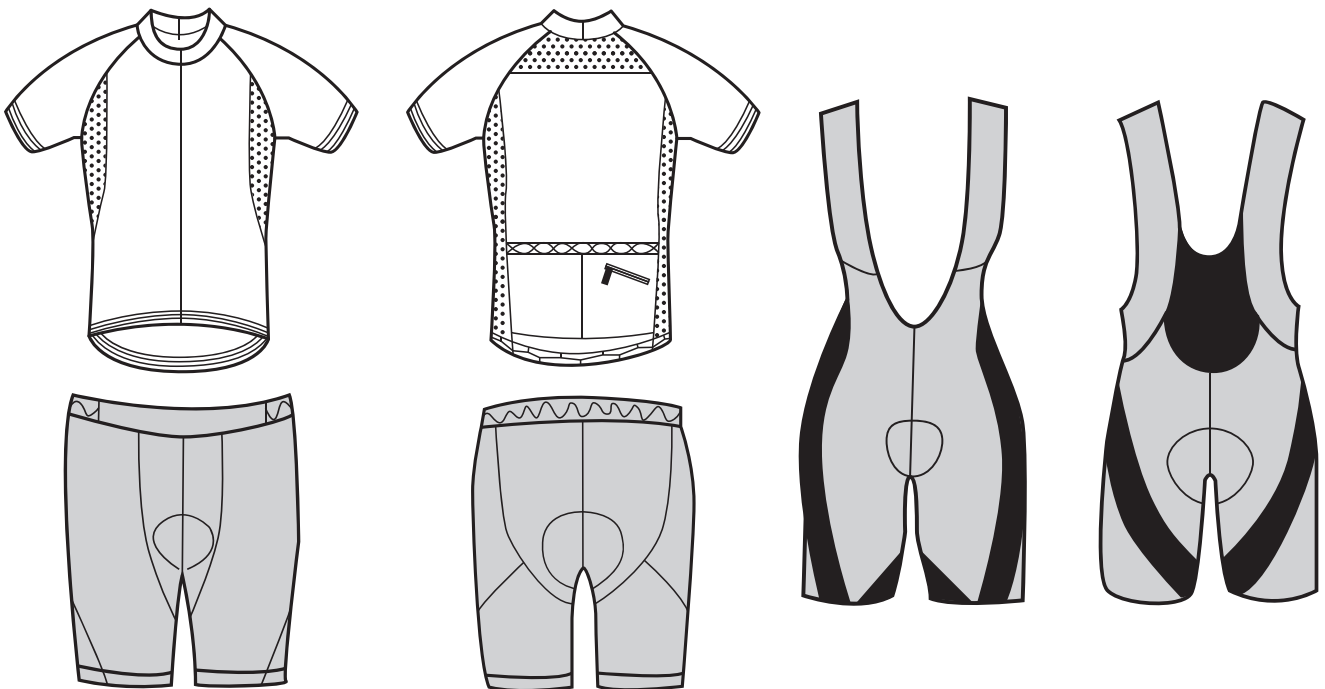
備考 Note :

本規範所適用之自行車衣係指貼身穿著之上衣與車褲。

The cycling clothing applicable to this Standard indicates the top clothing and painting which can fit the body.

· 自行車衣基本款式參考案例如下：

The reference cases of the cycling clothing are as follows:



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FTTS-GA-025

慢跑服 Jogging Clothing

適用範圍 Scope :

本規範規定慢跑服之基本品質與機能性能要求之評估標準及試驗方法。

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

等級標準 Performance specification :

• 基本品質之要求 Basic quality requirements

| 項次 No. | 項目 Item | 等級 Grade |
|--------|---------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 1 | 耐洗色牢度 ⁽¹⁾ Wash durability ⁽¹⁾ | 變褪色 Fade 4 級以上 Over grade 4 |
| | | 污 染 Pollution |
| 2 | 耐汗色牢度 ⁽¹⁾ Sweat durability ⁽¹⁾ | 變褪色 Fade 4 級以上 Over grade 4 |
| | | 污 染 Pollution |
| 3 | 耐摩擦色牢度 ⁽¹⁾ (白色除外) Friction durability ⁽¹⁾ (except for white) | 乾摩擦 Dry friction 4 級以上 Over grade 4 |
| | | 濕摩擦 Wet friction 3 - 4 級以上 Over grade 3-4 |
| 4 | 耐光色牢度 ⁽¹⁾ Light durability ⁽¹⁾ | 4 級以上 Over grade 4 |
| 5 | 織物尺寸變化率(%) Textile size change(%) | 合成纖維及其混紡: -5~+2% Synthesis fiber and hybrid fabric: -5~+2% |
| | | 其他: -8~+3% Others: -8~+3% |
| 6 | 成衣縫合效率(%) Seam efficiency (%) | 80% 以上 Over 80% |
| 7 | 擴散能力 (擴散面積, mm ²) Diffusion ability (diffusion area, mm ²) | 1,500mm ² 以上 Over 1,500mm ² |
| 8 | 乾燥速率(殘餘水分率, %) Drying speed (remaining moisture, %) | 13% 以下 Below 13% |
| 9 | 吸水速率-滴下法 ⁽²⁾ (秒) Moisture absorption - drop (sec) | 針織物 Knit 2 秒以下 Below 2 sec |
| | | 梭織物 Weave 5 秒以下 Below 5 sec |
| 10 | 吸水速率-蕊吸法 (mm) Moisture absorption - core absorption (mm) | 130mm 以上 Over 130mm |

註1: 功能性顏色如螢光、反光或特殊色之各項色牢度依利害關係人之要求而定。

註2: 吸水速率-滴下法是以"不再特別反射時間"之平均值評級。

Note 1: The functional color like fluorescence, light reflection or special color decided by the interested parties.

Note 2: Moisture absorption - the drop method is graded by the averaged value of "no special reflection time".

參考標準 Referenced Standard :

- CNS 15538
針織運動衣
Knitted sport clothing
- CNS 15659-1
紡織品吸濕速乾性能評估-第1部: 組合試驗法
Assessment of textile moisture absorption - Part 1: Combination test method
- CNS 15659-2
紡織品吸濕速乾性能評估-第2部: 水分傳導試驗法
Assessment of textile moisture absorption - Part 2: Test method for moisture conduction
- CNS 5612
織物透氣度試驗法
Test method for textile air-permeability
- GB/T 21980
專業運動服裝和防護用品通用技術規範
Specified standard of sport clothing and protection utility
- CNS 15001
防日光紫外線織物性能評估
Assessment of UV protection textiles
- ISO 20743
Textiles - Determination of antibacterial activity of textile products 之8.1 Absorption method (菌液吸收法)
- CNS 14945
一般用途抗菌紡織品性能評估
Assessment of general-purpose antibacterial textiles



· 機能要求 Functional Requirements

織物透氣度 Textile air-permeability :

主要布料測試面積20cm² · 壓差100Pa 下之透氣度需達180 mm/sec 以上。
The air-permeability reaches over 180mm/sec under the test area 20cm² and pressure 100 Pa.

織物紫外線防護 UV protection :

現狀與經20 次水洗後(水洗方法依2.3耐水洗性建議) · 依CNS 15001 之規定 · 其紫外線防護係數(UFP)需達25 以上。
The UV protection factor (UPF) for textile reaches over 25 according to CNS 15001 after washed 20 times (in compliance with 2.3).

織物抗菌性 Textile antibacterial :

現狀與經20次水洗後(水洗方法依表2.3耐水洗性建議 · 洗劑依CNS 14945 之3.2 之(10)之規定) · 依ISO 20743之規定 · 抗菌活性值(金黃色葡萄球菌、肺炎桿菌)需達2.0 以上。
The antibacterial activity for textile (staphylococcus aureus and streptococcus pneumoniae) reaches over 2.0 according to CNS 20743 after washed 20 times (method and agent in compliance with 2.3 and 3.2 (10) of CNS 14945).

織物水分傳導 Test method for moisture conduction :

表2. 織物水分傳導之評級 Table 2. Grade for textile moisture conduction

| 上層濕潤時間(sec) Upper-layer wet time (sec) | 底層吸水速率(% /sec) Low-layer moisture absorption (%/sec) | 底層擴散半徑(mm) Low-layer diffusion radius (mm) | 底層擴散速度(mm/sec) Low-layer diffusion speed (mm/sec) | 單向傳導指數(R) One-way conduction index (R) | 綜合吸濕性能 Moisture absorption |
|-------------------------------------------|---------------------------------------------------------|-----------------------------------------------|------------------------------------------------------|-------------------------------------------|-------------------------------|
| 5秒以下 below 5 sec. | 50% / 秒 以上 over 50% / sec | 18mm 以上 over 18mm | 3.0mm / 秒 以上 over 3.0mm / sec | 400R以上 over 400R | 0.60以上 over 0.60 |

織物耐水洗性 Wash Durability :

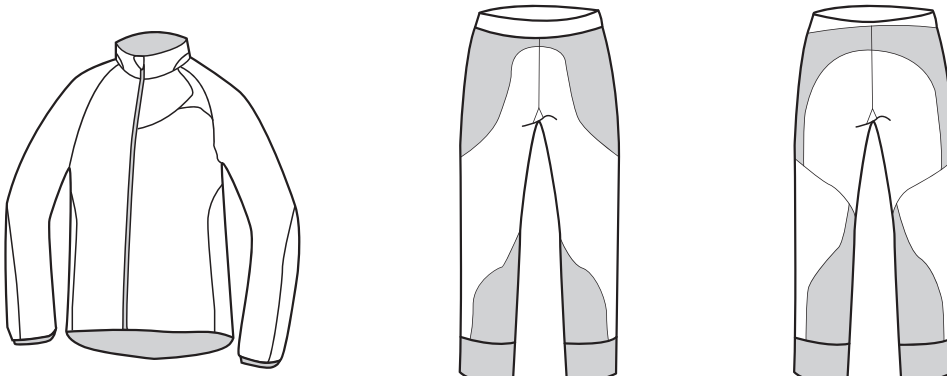
表3. 耐水洗性 Table 3. Wash durability

| 項目 Item | 一般要求 General requirement | 依據標準 Standard |
|-------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 耐水洗性 Wash durability | 水洗 20 次 Wash 20 times | <p>【A】 針織物以CNS 15140 表7 之8B 洗程 · 表3 之 (2) 滾乾條件 【A】 The knits conform to 8B in CNS 15140 Table 7 and (2) liquid wash condition in Table 3.</p> <p>【B】 梭織物以CNS 15140 表7 之6B 洗程 · 表3 之 (2) 滾乾條件 【B】 The weaves conform to 6B in CNS 15140 Table 7 and (2) liquid wash condition in Table 3.</p> |

註：耐水洗性除了水洗20 次之外 · 也可依利害關係人之要求而定。

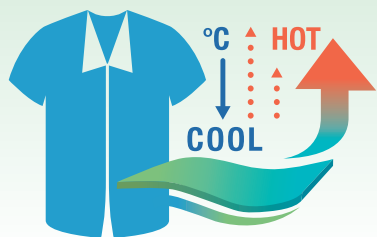
Note : The wash durability not only includes wash 20 times, but also can be decided by the interested parties.

· 慢跑服基本款式參考 Appendix: Basic models for jogging clothing



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用語解釋 Terminology :

服裝熱阻 total thermal insulation of the clothing ensemble with the manikin stationary, I_{cl} :

從人體皮膚到外層服裝表面的隔熱保溫性，包含了衣服與空氣層。依ISO15831之規定，在定義的環境下由靜態假人量測，以 $m^2 \cdot K/W$ 表示（ $1 Clo = 0.155 m^2 \cdot K/W$ ）。

It is the total thermal insulation from skin to ambient atmosphere, including clothing and boundary air layer. In accordance with ISO 15831, the measurement of thermal insulation is performed by means of a thermal manikin under a defined setting and designated in $1 Clo = 0.155 m^2 \cdot K/W$.

參考標準 Referenced Standard :

- CNS 15140
紡織品試驗之家庭洗滌及乾燥程序
Knitted sport clothing
- ISO 15831: 2004
Clothing-Physiological effects-Measurement of thermal insulation by means of a thermal manikin
- ISO 7730 : 2006
Ergonomics of the thermal environment - Analytical determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria

FTTS-GA-026

節能衫

Specified Requirements of Energy-saving Clothing

適用範圍 Scope :

本規範適用於夏季室內上班用正式襯衫與服飾，評估其穿著時是否具備涼感舒適等性能之試驗方法與品質要求，以達到節約空調能源的目的。

This Standard applies to formal shirts and garments worn in the office during summertime, and the test methods and quality requirements to assess whether such clothing has the properties of feeling cool and comfortable so as to achieve the purpose of saving air-conditioning energy.

等級標準 Performance specification :

服裝之PPD：20%以下，符合節能衫要求。

Clothing's PPD : Below 20%, to meet the energy-saving requirement

評估服裝於特定環境下的PPD Assess garments' PPD under a certain environment :

依ISO 7730冷熱環境人因工程學評估標準之規定。

將測得的 I_{cl} 代入ISO7730的熱舒適評估運算程式，並輸入另外6個環境-生理參數，亦即本規範設定之夏季室內空調環境與辦公室活動量，即可得到PMV。

In accordance with the standards of ISO 7730, Ergonomics of the thermal environment- Analytical determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria.

PMV is derived from ISO 7730 Equations by setting in I_{cl} with other six environment-physical parameters, that is, the summer indoor air-conditioned environment and office activity level set by the Standard.

預測不滿意百分比 Predicted percentage dissatisfied, PPD :

由統計學上的田野調查法等方式將PMV用百分比表示出人們在特定環境下的冷熱舒適度感覺之不滿意程度。

Statistical methodologies such as field research are used to express PMV with percentage to show the occupants' dissatisfaction with the given thermal condition.

PMV和PPD的轉換分布比較表 Distribution of PMV and PPD

| 冷熱感覺 Thermal Sensation | 很熱 Hot | 熱 Warm | 溫 Slightly Warm | 適中 Neutral | 涼 Slightly Cool | 冷 Cold | 很冷 Freezing |
|---------------------------|-----------|-----------|--------------------|---------------|--------------------|-----------|----------------|
| PMV | +3 | +2 | +1 | 0 | -1 | -2 | -3 |
| PPD | 99.1 | 76.8 | 26.1 | 5 | 26.1 | 76.8 | 99.1 |

| 廠商名稱 Company | 聯絡人 Contact Person | 網址 Website | 電子信箱 E-mail Address | 電話 Telephone | *型態 Type |
|----------------------------------------------------------------------------------------|-----------------------|-------------------------|----------------------------|---------------------|-------------|
| FTTS-FA-001 一般用途抗菌加工紡織品 Antibacterial Textiles for General Use | | | | | |
| 陸際科技有限公司 Shen Ji Technology Co., Ltd. | 葉建良 | 5kg.com.tw | shenjitw@yahoo.com.tw | 886-2-29003645 | 2 |
| FTTS-FA-002 醫療用途抗菌加工紡織品 Antibacterial Textiles for Medical Use | | | | | |
| 高斯椅業企業有限公司 Gauss Furniture L.L.C. | 林淑綺 Jarrel Lin | www.gauss-chair.com | gauss01@ms13.hinet.net | 886-6-2795725 | 1 |
| FTTS-FA-004 吸濕排汗速乾紡織品 Moisture Transferring and Quick Drying Textiles | | | | | |
| 藝寶創意飾品有限公司 Yi Bao Originality Life Accessory Co., Ltd. | 吳菁菁 Ms.Wu | www.yearen.com.tw | Yearen32@yahoo.com.tw | 886-6-2987810 | 1 |
| 遊遍天下實業有限公司 Globe Trotter Industrial Co., Ltd. | 趙婉汝 Raneer Chao | www.globetrotter.com.tw | Kings.family008@gmail.com | 886-6-7893380 | 1 |
| 蜜塔詩股份有限公司 Mitas Co., Ltd. | 周淑珠 Ms. Chou | www.mitast.com | mit.mit175@msa.hinet.net | 886-6-3386873 | 1 |
| 新光合成纖維股份有限公司 ShinKong Synthetic Fibers Corp. | 胡平一 Sam Hu | www.shinkong.com.tw | hupini@shinkong.com.tw | 886-2-25071251#7848 | 1 |
| 金祥順企業股份有限公司 Chin Hsiang Shun Co., Ltd. | 郭玉珍 Jasmine Kuo | | jasper@chsco.com.tw | 886-3-3010808#162 | 1 |
| 台文針織股份有限公司 Diamond Hosiery & Thread Co., Ltd. | 李若榛 Apple | | apple.li@zmo.com.tw | 886-2-27005386#323 | 1 |
| 金祥順企業股份有限公司 Chin Hsiang Shun Co., Ltd. | 郭玉珍 Jasmine Kuo | | jasper@chsco.com.tw | 886-3-3010808#162 | 1 |
| 翰新實業股份有限公司 Handseltex Industrial Corp., | 杜卓恩 Austin | www.hst.com.tw | austin@hst.com.tw | 886-2-25217356#52 | 1 |
| 葉菁有限公司 Yea Chin Co., Ltd. | 林進昇 Jinshen Lin | www.bodystory.tw | jinshen7@gmail.com | 886-2-25565855 | 1 |
| 厚達織品有限公司 Hana Fashion Co., Ltd. | 劉曉菁 Ms.Liu | www.hana-fashion.com.tw | hana07@hana-fashion.com.tw | 886-6-2500376 | 1 |
| 聖手企業有限公司 Sain Sou Co., Ltd. | 林琨翔 Sten Lin | www.sain-sou.com.tw | sten.lin@msa.hinet.net | 886-2-26515262#23 | 1 |
| 凱俐紡織股份有限公司 Can Link Textile Co., Ltd. | 盧炫麗 Lufa | | treasa@canlink.com.tw | 886-2-28265175 | 1 |
| 瑞元股份有限公司 Rui Yuan Co., Ltd. | 施于婷 / 夏光華 | www.strong-tex.com.tw | iling@strong-tex.com.tw | 886-4-24639959 | 2 |
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| 上比實業有限公司 S.B.Motif Co., Ltd. | 陳詠霖 Yong-Lin Chen | | sb28948694@kimo.com | 886-4-23580956 | 1 |
| 麗黛實業有限公司 Li Dai Industrial Co., Ltd. | 柯昆欣 Mr. Kuo | www.shinhuahang.com.tw | sharknrudry@hotmail.com | 886-2-22779906 | 1 |
| 瑞元股份有限公司 Rui Yuan Co., Ltd. | 夏光華 Kuang-Hua Hsia | www.strong-tex.com.tw | iling@strong-tex.com | 886-4-24639959 | 1 |
| 台觀實業股份有限公司 Tai Chin Co., Ltd. | 陳曉盈 Siao-Ying Chen | | service@lisepo.com.tw | 886-4-25627666 | 2 |
| 東聯紡織有限公司 Glowtex Co., Ltd. | 古素琴 Jean Ku | | jean-ku@glowtex.com.tw | 886-2-23257448 | 1 |
| FTTS-FA-005 透濕防水紡織品 Water-Vapor Permeable and Liquid-Water Impermeable Textiles | | | | | |
| 瑞元股份有限公司 Rui Yuan Co., Ltd. | 施于婷 / 夏光華 | www.strong-tex.com.tw | iling@strong-tex.com.tw | 886-4-24639959 | 2 |
| 麗黛實業有限公司 Li Dai Industrial Co., Ltd. | 柯昆欣 Mr. Kuo | www.shinhuahang.com.tw | sharknrudry@hotmail.com | 886-2-22779906 | 1 |
| FTTS-FA-008 防紫外線紡織品 Ultraviolet Protective Textiles | | | | | |
| 遊遍天下實業有限公司 Globe Trotter Industrial Co., Ltd. | 趙婉汝 Raneer Chao | www.globetrotter.com.tw | Kings.family008@gmail.com | 886-6-7893380 | 1 |
| 迅瑩股份有限公司 XunYing Co., Ltd. | 羅美芝 Ms.Luo | nil | worker594@gmail.com | 886-2-29031855 | 1 |
| 元葵有限公司 Yumoza Co., Ltd. | 葉元孝 Elias | www.yumoza.com | elias.yumoza@msa.hinet.net | 866-2-22645268 | 1 |
| 藝寶創意飾品有限公司 Yi Bao Originality Life Accessory Co., Ltd. | 吳家屏 Ms.Wu | www.yearen.com.tw | Yearen32@yahoo.com.tw | 886-6-2987810 | 1 |
| 富宇紡織科技企業有限公司 Advance Hitech Textile International Co. | 張佩淇 Peggaj Chang | www.advtex.com.tw | sales216@sftt.com.tw | 886-4-26224687#217 | 1 |
| 翰新實業股份有限公司 Handseltex Industrial Corp., | 杜卓恩 Austin | www.hst.com.tw | austin@hst.com.tw | 886-2-25217356#52 | 1 |
| 岑記國際股份有限公司 Cheng Ji International Co., Ltd. | 李志偉 Stanley Lee | nil | stanley@chenji.com.tw | 886-2-27825058#106 | 1 |
| 三締服飾有限公司 3D Clothing Company | 游紫彤 Yo Yo | 無 | a3dking@yahoo.com.tw | 866-6-2201875 | 2 |
| 集盛實業股份有限公司 Zig Sheng Industrial Co., Ltd. | 邱瑞楠 Tony Tsiu | www.zigsheng.com | a06@zigsheng.com | 886-2-25557151#8826 | 1 |
| 凱俐紡織股份有限公司 Can Link Textile Co., Ltd. | 盧炫麗 Lufa | nil | treasa@canlink.com.tw | 886-2-28265175 | 1 |
| 磊旺有限公司 Levon Outdoor Co.,Ltd. | 梁紫菁 Eliza | www.levonsports.com | shipping@levonsports.com | 866-2-32340205 | 2 |
| 麗黛實業有限公司 Li Dai Industrial Co., Ltd. | 柯昆欣 Mr.Kuo | www.shinhuahang.com.tw | sharknrudry@hotmail.com | 886-2-22779906 | 1 |
| 宏藝服飾企業有限公司 Hung Yi Clothing Enterprises Ltd. | 吳家屏 Ms.Wu | nil | Yearen32@yahoo.com.tw | 886-6-2925038 | 1 |
| 順奕國際有限公司 Shunyin International Co., Ltd. | 陳明舜 Mr.Chen | www.shunyin.tw | peter@shunyin.tw | 886-3-3697566 | 1 |
| FTTS-FA-009 抗靜電紡織品 Antistatic Textiles | | | | | |
| 天邑國際事業有限公司 Skytal International Co., Ltd. | 楊曉蓓 Tracey | www.skytal.com.tw | skytaltw@gmail.com | 886-2-25450869 | 1 |
| FTTS-FA-010 遠紅外線紡織品 Far Infrared Textiles | | | | | |
| 厚達織品有限公司 Hana Fashion Co., Ltd. | 劉曉菁 Ms.Liu | www.hana-fashion.com.tw | hana07@hana-fashion.com.tw | 886-6-2500376 | 1 |
| 南亞塑膠工業股份有限公司 (纖維事業部) Nan Ya Plastics Co., Polyester Fiber Division | 黃呈水 C.S. Huang | www.npc.com.tw | cshwang@npc.com.tw | 886-2-29019141-2007 | 1 |

| 廠商名稱 Company | 聯絡人 Contact Person | 網址 Website | 電子信箱 E-mail Address | 電話 Telephone | * 型態 Type |
|----------------------------------------------------------------------------------|-----------------------|-------------------------|-----------------------------|----------------------|--------------|
| FTTS-FA-010 遠紅外線紡織品 Far Infrared Textiles | | | | | |
| 弘康國際股份有限公司 Healthin International Co. Ltd. | 蔡瑞珍 Kiki Tsai | www.healthin.com.tw | info@healthin.com.tw | 886-2-23648115 | 1 |
| 熵威國際貿易有限公司 DNV International Co., Ltd. | 陳堂嘉 Daniel | | tanchia@gmail.com | 886-2-23451202 | 1 |
| 寶楷醫療器材有限公司 Chiun Der Enterprise Co., Ltd. | 周鴻基 Mr.Chao | www.projasper.com.tw | projasper@projasper.com.tw | 886-2-82602276 | 2 |
| FTTS-FA-011 潑水紡織品 Water Repellent Textiles | | | | | |
| 晶鈿精品股份有限公司 Crystal Profit Boutique Co., Ltd. | 陳美足 Mei-Tsu Chen | www.gentlemanduck.com | ac918158821@hotmail.com | 886-2-27864088 # 818 | 1 |
| 吉信織造廠股份有限公司 Chi Hsin Weaving Fty Co., Ltd. | 李明明 Vivienne Lee | www.chihsin.com.tw | vivienne@chihsin.com.tw | 886-4-26560231 | 1 |
| 遊遍天下實業有限公司 Globe Trotter Industrial Co., Ltd. | 趙婉汝 Raneer Chao | www.globetrotter.com.tw | Kings.family008@gmail.com | 886-6-7893380 | 2 |
| 琦程實業有限公司 Kings Family Industrial Co., Ltd | 賴詠琪 Hedda Lai | www.globetrotter.com.tw | Kings.family01@gmail.com | 886-6-7213380 | 1 |
| 四季織企業有限公司 Shikiori Enterprise Co., Ltd. | 郭君如 Ms. Kuo | | Mandy_kuo_605@hotmail.com | 886-2-22679455 | 2 |
| FTTS-FA-015 防焰紡織品 Flame-Resistant Textiles | | | | | |
| 葵盈有限公司 Kuiwin Corporation | 黃怡華 Ms. Huang | | a2595512@kuiwin.com.tw | 886-6-2544042#503 | 1 |
| FTTS-FA-018 異味去除(消臭)紡織品 Specified Requirements of Deodorized Textiles | | | | | |
| 僑柯有限公司 Chyau-Ke Co. Ltd. | 陳淑惠 Ms. Chen | www.chyauke.com.tw | info@chyauke.com.tw | 886-4-23300496 | 2 |
| 統全興業股份有限公司 Tung Tung Enterprise Co., Ltd. | 吳育玫 Wu, Yu-Mei | www.tung-tung.com.tw | bbsid445@ms16.hinet.net | 886-4-8736639 | 1 |
| 晉美紡織企業股份有限公司 Tsinmei Textile Co., Ltd. | 陳思樺 Szu-Hua Chen | www.tsinmei.com | tsinmei.lucky@msa.hinet.net | 886-4-7565668 | 1 |
| 台灣化學纖維股份有限公司 (紡織事業部) Formosa Chemical & Fibre Corporation (Textile Division) | 楊燕東 Yeng Dong Yang | www.fcf.com.tw | | 886-2-27122211#8380 | 1 |
| FTTS-FA-019 瞬間涼感紡織品 Cool Feeling Textiles | | | | | |
| 廈門依鑽貿易有限公司 Xiamen Yizuan Trading Co., Ltd. | 唐麗玲 Jpanna | | Yizuan9168@sina.com | 86-592-2221256 | 1 |
| 集盛實業股份有限公司 Zig Sheng Industrial Co., Ltd. | 邱瑞楠 Tony Tsiu | www.zigsheng.com | a06@zigsheng.com | 886-2-2557151#8826 | 1 |
| 迅瑩股份有限公司 XunYing Co., Ltd. | 羅美芝 Ms. Luo | | worker594@gmail.com | 886-2-29031855 | 1 |
| 新光合成纖維股份有限公司 ShinKong Synthetic Fibers Corp. | 胡平一 sam Hu | www.shinkong.com.tw | hupini@shinkong.com.tw | 886-2-25071251#7848 | 1 |
| 南亞塑膠工業股份有限公司纖維事業部 Nan Ya Plastics Co., Polyester Fiber Division | 黃呈水 C.S. Huang | www.npc.com.tw | cshwang@npc.com.tw | 886-2-29019141#2007 | 1 |
| 金祥順企業股份有限公司 Chin Hsiang Shun Co., Ltd. | 郭玉珍 Jasmine Kuo | | jasper@chsco.com.tw | 886-3-3010808#162 | 1 |
| 康呈生醫科技股份有限公司 Kangcheng Sheng Medical Technology Co., Ltd. | 許小平 Siao-Ping Syu | www.topro.com.tw | Saiopingshu@cometuebio.com | 886-4-37073698 | 1 |
| 翰新實業股份有限公司 Handseltex Industrial Corp., | 杜卓恩 Austin | www.hst.com.tw | austin@hst.com.tw | 886-2-25217356#52 | 1 |
| 集盛實業股份有限公司 Zig Sheng Industrial Co., Ltd. | 林桂鋒 Ivan Lin | www.zigsheng.com | ivan_lin@zigsheng.com | 886-2-2557151#8841 | 1 |
| 岑記國際股份有限公司 Cheng Ji International Co., Ltd. | 李志偉 Stanley Lee | | stanley@chenji.com.tw | 886-2-27825058#106 | 2 |
| 三加一能量科技股份有限公司 Four Elements Energy Biotechnology Co., Ltd. | 郭莎莎 Sabina Kuo | www.talent yarn.com | service@talent yarn.com | 886-2-25624913 | 1 |
| 磊旺有限公司 Levon Outdoor Co., Ltd. | 梁潔菁 Eliza | www.levonsports.com | shipping@levonsports.com | 866-2-32340205 | 2 |
| 晉美紡織企業股份有限公司 Tsinmei Textile Co., Ltd. | 陳思樺 Szu-Hua Chen | www.tsinmei.com | tsinmei.lucky@msa.hinet.net | 886-4-7565668 | 1 |
| 巧琳有限公司 Chardlin Co., Ltd. | 郭鎮綱 Chengang Kuo | | argun511@gmail.com | 886-2-25522969 | 2 |
| 葉青有限公司 Yea Chin Co., Ltd. | 陳春霖 Mr. Chen | www.bodystory.tw | yeachin2@ms57.hinet.net | 886-2-25565855 | 1 |
| 泉碩科技股份有限公司 Mega Master Technology Co., Ltd. | 熊漢興 | | cti596@yahoo.com.tw | 886-2-25596450#880 | 1 |
| FTTS-FA-004 吸濕排汗速乾紡織品 Moisture Transferring and Quick Drying Textiles | | | | | |
| + FTTS-FA-008 防紫外線紡織品 Ultraviolet Protective Textiles | | | | | |
| 遊遍天下實業有限公司 Globe Trotter Industrial Co., Ltd. | 趙婉汝 Raneer Chao | www.globetrotter.com.tw | Kings.family008@gmail.com | 886-6-7893380 | 2 |
| 翰新實業股份有限公司 Handseltex Industrial Corp., | 杜卓恩 Austin | www.hst.com.tw | austin@hst.com.tw | 886-2-25217356#52 | 1 |
| 凱俐紡織股份有限公司 Can Link Textile Co., Ltd. | 盧玟麗 Lufa | | treasa@canlink.com.tw | 886-2-28265175 | 1 |
| FTTS-FA-004 吸濕排汗速乾紡織品 Moisture Transferring and Quick Drying Textiles | | | | | |
| + FTTS-FA-019 瞬間涼感紡織品 Cool Feeling Textiles | | | | | |
| 新光合成纖維股份有限公司 ShinKong Synthetic Fibers Corp. | 胡平一 Sam Hu | www.shinkong.com.tw | hupini@shinkong.com.tw | 886-2-25071251#7848 | 1 |
| FTTS-FA-008 防紫外線紡織品 Ultraviolet Protective Textiles | | | | | |
| + FTTS-FA-019 瞬間涼感紡織品 Cool Feeling Textiles | | | | | |
| 迅瑩股份有限公司 XunYing Co., Ltd. | 羅美芝 Ms. Luo | | worker594@gmail.com | 886-2-29031855 | 1 |
| 翰新實業股份有限公司 Handseltex Industrial Corp., | 杜卓恩 Austin | www.hst.com.tw | austin@hst.com.tw | 886-2-25217356#52 | 1 |
| 岑記國際股份有限公司 Cheng Ji International Co., Ltd. | 李志偉 Stanley Lee | | stanley@chenji.com.tw | 886-2-27825058#106 | 2 |
| 磊旺有限公司 Levon Outdoor Co., Ltd. | 梁潔菁 Eliza | www.levonsports.com | shipping@levonsports.com | 866-2-32340205 | 2 |