SAFEGUARDS
SGS CONSUMER TESTING SERVICES

SOFTLINES NO. 204/10 DECEMBER 2010

COLOUR FASTNESS TO PERSPIRATION AND LIGHT IN TEXTILES

BS EN ISO 105-B07 Colour fastness to Light of textiles wetted with artificial perspiration was issued in May 2009. AATCC Test Method 125: Colourfastness to Perspiration and Light is a similar test method and is partially equivalent to BS EN ISO 105-B07.

Colour fastness to perspiration and light is a major concern in textile products. Apparel items worn outdoors, especially those items that are worn during exercise and sports activities such as hiking and golf, need to be resistant to fading from both light and perspiration. When tested together in one test, the results of the light and perspiration test may be more predictive of potential issues than when each test is done separately. Colour fastness to perspiration and light testing measures the resistance to change in colour as a result of exposure to light of dyed textiles which have been pre-treated with an artificial perspiration solution.

The following table shows a comparison of these two test methods.

COLOURFASTNESS TO PERSPIRATION AND LIGHT		
Test method	AATCC 125: 2009 (in accordance with AATCC 16–Option 3)	ISO 105-B07: 2009 (in accordance with ISO 105-B02)
Referred market	US	EU
Testing light source	Xenon-arc Lamp	Xenon-arc Lamp
Machine conditions	Black-panel temperature 63+/-1 °C	Black-panel temperature 60-65 °C
	Relative Humidity 30 +/- 5%	Relative Humidity 50 +/-5%
pH of the solution	4.3	5.5 & 8.0
Test duration	20 AFUs	until the desired blue scale has faded to either grey scale 4 or to grey scale 3 as agreed.
Assessment	Use the AATCC Grey Scale for colour change from grade 5 to grade 1 (the worst result)	Use the ISO Grey Scale for colour change from grade 5 to grade 1 (the worst result)

The perspiration and light fastness is the resistance of dyestuffs to the influence of constituents of the perspiration and light energy. Colour fading is generally affected by a photo-reduction reaction. Therefore, dyestuffs selected for products that need colourfastness to light and perspiration should have a certain degree of resistance to reduction. Checking the technical data provided by dyestuff suppliers about perspiration and light fastness properties of dyes is one solution. For example, azo-based reactive dyestuffs tend to have a good fastness to the combination of perspiration and light and anthraquinone-based reactive dyestuffs generally have a good resistance to both oxidation and reduction.

SGS offers you a wide range of strategic services with extensive experience and worldwide support. With our well-developed laboratories and experienced textile and footwear specialists, we provide technical support and risk management on all Softlines products including apparels, home textiles, fabrics and yarns, footwear, leather, rubber, and feather and down products.

For further information on our full range of services, please contact your SGS local office or visit our Softlines website.

FOR ENQUIRIES:

Global Competences Support Centre: gcsc@sgs.com
HK– Ruth Hon Tel: +852 2774 7148 or Ruth.Hon@sgs.com

Asia – Hong Kong. Tel: +852 2334 4481 Fax: +852 2144 7001 mktg.hk@sgs.com
Australasia – Perth. Tel: +61 (0) 3 9790 3418 Fax: +61 (0) 3 9701 0988 au.cts@sgs.com
Europe – London —UK. Tel: +44(0) 20 3008 7860 Fax: +44 (0) 20 3008 7870 gb.cts.sales@sgs.com
Africa & Middle East – Turkey. Tel: +90 212 368 40 00 Fax: +90 212 296 47 82 sgs.turkey@sgs.com
Americas – USA. Tel: +1 973 575 5252 Fax: +1 973 575 7175 uscts.inquiries@sgs.com

www.sgs.com/cts Global Competences Support Centre: gcsc@sgs.com