

SAFE GUARDS

SGS CONSUMER TESTING SERVICES

SOFTLINES

NO. 065/08 AUGUST 2008

The Yellowing Problem of White Packaged Textiles – Phenolic Yellowing

Yellowing of white and pastel coloured textiles and garments has been a problem for many years in the textile industry. The majority of yellowing problem is not due to the yellowing of fibre substrate or textile finish but the yellowing of phenolic antioxidants of packaging materials which migrate onto the textile substrates giving rise to the yellowing phenomenon.

What is Phenolic Yellowing on textiles?

Phenolic yellowing is caused by phenolic compounds with the presence of nitrogen oxides (NOx) to give yellowing on the textile materials.

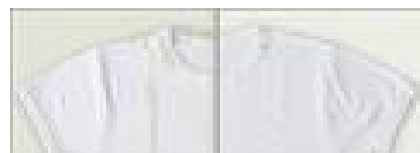
Publication of ISO 105-X18 : 2007 - Colourfastness to Phenolic yellowing

ISO 105 X 18: 2007 is a simulation test which can effectively assess the potential of textiles materials to phenolic yellowing. A brief summary of the methods included in this standard is as follows:

A test package is prepared, consisting of test papers, test specimens and one control fabric. Each specimen and the control fabric are individually placed between a folded test paper placed between two glass plates in a horizontal formation. The stack of plates, test papers, specimens and control fabric are then wrapped firmly in BHT (butyl hydroxytoluene) free polyethylene film to create an airtight package. The package is loaded in a test device, which is placed in an incubator/oven, for a specified time at a specific temperature.

NOTE: The method is specific to phenolic yellowing and does not cover many other possible causes of yellow discolouration found on textile materials.

On removal of the package from the incubator/oven and test device, it is allowed to cool. The package is opened, and the control fabric and specimens are assessed immediately by comparison with the grey scale for assessing staining.



SGS offer a wide range of tests on textile, and can provide professional advice in choosing appropriate test methods for products with widely different end uses. Please contact us for more information.

FOR ENQUIRIES:

Global Competences Support Centre: gsc@sgs.com
Ruth Hon + +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 8991 3410 Fax: +44 (0) 20 8991 3417 gb.cts.sales@sgs.com
Africa & Middle East – Turkey. Tel: +90 212 225 0024 Fax: +90 212 296 47 82 sgs.turkey@sgs.com
Americas – USA. Tel: +1 973 575 5252 Fax: +1 973 575 1193 Marketing.CTS.US@sgs.com

www.sgs.com Global Competences Support Centre: gsc@sgs.com

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