

THREE critical factors you must know about textiles & allergies

[Special industry Report by Airmid Healthgroup](#)

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Did you know?

- *The US National Institutes of Health and the Centres for Disease Control have both recently highlighted the sharp rise in incidence of allergies and asthma in America.*
- *Nearly 70% of USA households are affected by asthma & allergies*

There are many legal pitfalls when testing textiles for allergy claims and confusing terms like 'hypo-allergenic' and 'dust mite proof' can make it harder.

This industry report will assist you in deciding which path to take as a textile manufacturer and will save you time and money in product development.

1. What is the difference between an 'allergen barrier' and 'dust mite proof'?

This is a common area of confusion. The phrase 'dust mite proof' is often used but is more appropriate to a filling. It often is meant to refer to the fact that dust mites do not breed and multiply in the environment often due the filling having a particular treatment. It is important to note that when a textile is claiming that it is an allergen barrier, it is claiming to block allergen particles such as *Fel d 1* particles (i.e. cat allergen) which are less than 10µm in diameter and the mite faecal pellets, *Der p 1* which ranges between 10µm and 40µm. The dust mite itself has a size of 250µm to 300µm. The best way to assess allergen barrier is using tests such as the Allergen Barrier Test with Airflow and Simulated Use Allergen Barrier Test. The degree of anti-dust mite activity of treated textiles in a controlled environment can be assessed on a small scale using the AAATC 194-2008 test method and is commonly referred to as the 'heat escape' method. Large climate controlled chamber models or field tests may give more meaningful data. While fulfilling this test make sure the textile still has good comfort physiology. The comfort of a fabric can be assessed by a number of parameter such as Air Permeability (ISO 9237) and Water Vapour Resistance (ISO 11092).

2. Is thread count or pore size helpful for allergy claims?

In the March 2011 article in Home Textile today Editor in Chief Jennifer Marks highlighted the confusion over 'thread count inflation' and its lack of meaning. Jennifer expects to see thread count identification to drop into obscurity on packaging. The issue over thread count has a further relevance for people wishing to make decisions with regards to pore size and allergen barrier efficacy. The tendency for many retailers to associate pore size with thread count and hence the bedding textile's ability to block allergens is incorrect. Pore size is often measured using bubble point as it is quick and fairly easy to do, however due to unopened pores and pore size variation it is probably better to do scanning electron microscopy or projection microscopy which also has the added benefit of image generation. These images will also illustrate the warp and weft of the fabric demonstrating how the high threads count can be claimed but with no added benefit in pore size. Pore size often only loosely correlates with allergen filtration efficacy and there are a number of factors that contribute to this including van der Waals forces and allergen conformation

3. What do I need to know about EPA regulations or EU directives for pesticides

Regulatory bodies in the USA, Canada and the Europe such as the EPA are increasingly strict with the interpretation of allergen avoidance products and you need to be careful. Essentially any product that makes dust mite claims runs the risk of being classified as BIOCIDAL under this legislation. Many companies are dramatically narrowing the product claims they make in Europe after meeting government officials. Retailers are increasingly risk averse in this area and product recalls are rising. Make sure that your allergy marketing material passes the tech/reg department for your clients' and more importantly the test method you have used is acceptable to their legal department.

☛ **To get further expert information on Textile allergy testing for asthma and allergies please call +353-(0)1-633 6820 or e mail info@airmidhealthgroup.com**

ABOUT AHG: airmid healthgroup ltd is in the business of results for health in the indoor environment. We add value at every stage of the product innovation cycle and route to market. We are seen by many of our clients as a specialist extension of their in-house R & D departments. AHG are the only ISO accredited laboratory in the world for *Der p 1* and *Fel d 1* allergy testing. AHG data is accepted by the Asthma and Allergy Foundation of America, the Asthma Society of Canada, Asthma UK and by the international Certification and Standards Body Allergy Standards Ltd. AHG researchers are members of and sit on a number of industry committees including the British Standards Institute, the American Society of Testing Materials and the USA Home Fashion Products Association