

Formaldehyde in Top knitted Children's Wear within Egyptian Market

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Abstract

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Formaldehyde is a reactive, strong-smelling gas at room temperature; children, especially those with diagnosed asthma, may be more likely to show impaired pulmonary function and symptoms than are adults following chronic exposure to formaldehyde. Textile materials containing treating formaldehyde resins widely used in cotton, cotton/ polyester or wrinkle-resistant linen; as well used in anti-shrink agents mainly in cellulosic fabrics. On the other hand, some other after treatment of substantive dyeing, hardening of casein fibers, as a wool protection agent, anti mould and above all as a cross linking agent in resin finishing.

The purpose of this paper is to first, focus on the toxicity literature of formaldehyde being used into garments, secondly, the reality of the presence of such a chemical into children wear within Egyptian market.

A sample of thirty knitted cotton top garments, all of which are children's wear collected randomly from the Egyptian market, has been tested using both Spot test and EN ISO 14184-1:1998 Textiles – Determination of Formaldehyde – Part 1: Free and Hydrolyzed Formaldehyde (Water Extraction Method) detecting formaldehyde presence and percentage within tested samples.

Conclusion was drawn based on resultant data, out of thirty children's cotton, cotton blended knitted dyed and printed t-shirts, all obtained <10ppm or <16ppm according to Spot Test and EN ISO 14184-1:1998, respectively, examined at both Egyptian Textile Development Centre of the Textile Consolidation Fund and Intertek consumer goods Egypt laboratory. Knitted cotton and cotton/polyester Children's top wear were detected formaldehyde free within Egyptian market.

Keyword:

Formaldehyde - knitted Children's Wear - chemical emissions - Children suffering asthma