

**TECHNICAL TUESDAYS**

TOPIC: Limitation of Nickel Release from Textile Accessories:

REF: REF: TT/ Sep 2014/ WK 4

Nickel Release in Extended Wear:

Nickel presence is known to cause contact dermatitis in approximately 10 % of the European population. Therefore, a regulation restricting the amount of Nickel that is released by metal accessories such as rivets, zippers, buttons was necessary.

Use of Nickel was restricted in metallic accessories by many countries in Europe, due to the potential to cause skin allergies.

Until January 2000, the presence of Nickel on metal accessories was tested by the qualitative Dimethyl glyoxime test. This test was used only to determine presence of Nickel on the surface of the metallic component.

Very often a superficial coat of suitable material masked the exposure of the nickel containing metal and gave acceptable results when tested. On routine wear, this coating progressively abraded, exposing the nickel once again, leading to problems at the consumer's end.

In order to eliminate such possibilities a new test method for nickel presence was developed to simulate extended wear, designated as EN 12472. The new method for quantifying the Nickel release is designated EN 1811.

<u>Summary of Nickel Release Requirement</u>	
*Limits / Restriction	Not more than 0.5 $\mu\text{g}/\text{cm}^2$ /week
Characteristics / Toxicity	Highly Allergenic : Causes contact dermatitis in an estimated 10 % of the European population
Processes	Used in alloying to improve hardness of metals such as brass etc.
Test Method	EN 1811 / 12472 which incorporates: Wear simulation Corrosion simulation Extraction in artificial sweat Detection & Quantification with AAS

\*Limits mentioned here are typical. Each Buyer may have own limits

Reference: Ecological considerations, parameters and testing for the textile industry by Texan lab-2014

Link: <http://www.texanlab.com/documents/downloads/15.pdf>

Wishing you a happy week ahead!

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