Publication of New Test Method to Determine Chromium VI in Leather - EN ISO 17075:2007

The publication of a new test method for determination of Cr(VI) in leather will resolve existing confusion over detection limits and permitted levels of Cr(VI) in leather. The member countries of the EU have until May 2008 to publish their own national version of

EN ISO 17075:2007 Leather - Chemical tests - Determination of chromium (VI) content


Why is Cr(VI) a problem?

Hexavalent chromium compounds, Cr(VI), are known to be carcinogenic. Skin contact triggers dermatitis, allergies and irritations. Trivalent chromium compounds, Cr(III), are less damaging to health due to their limited absorption by the body.

Why is it in leather?

The most common tanning process for leather is chrome tanning. If this process is not controlled properly, Cr(III) compounds can oxidise to the Cr(VI) form, leaving residues of Cr(VI) in the tanned leather.

Is there any legislation?

The only country to have legislation in place restricting Cr(VI) is Germany. They have a maximum permitted level of 3mg/kg, which is the limit of detection of the DIN 53314 test method.

There is no actual EU legislation, although a Commission Decision was published, 2002/231/EC “Commission Decision establishing ecological criteria for the award of the Community eco-label to footwear.” In this document, the recommended level for Cr(VI) is “maximum 10mg/kg”

This is where confusion over the limit for Cr(VI) has arisen.
Why different limits?

The original German legislation was written around test method DIN 53314. The limit of detection for this method is 3mg/kg.

The EU Decision 2002/231/EC refers to test method CEN/TS 14495:2003. The limit of detection for this method is quoted as 10mg/kg.

What both the German legislation and the EU document are both really saying is that no Cr (VI) should be detected.

New test standard

EN ISO 17075:2007 has a detection limit of 3mg/kg

Recommendation?

Cr(VI) should be prohibited in all leather that comes into skin contact. Whether testing to EN ISO 17075 or DIN 53314, the detection limit is the same.

The maximum amount of Cr (VI) permissible is 3mg/kg.

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