

Welcome to Update.....

Aug 2008

The Olympic excitement continues at BLC's with the August edition of Update. We provide you with an article on mercury, information on US law on lead, heel fatigue and leather verification. You can also register for the training dates in September - including courses in China and the UK, on restricted substances, garment construction, cleaning and aftercare and understanding automotive leather. Also please register for the FDRA conference below.



Mould Spore Challenge Testing

Following recent interest in fungicides, BLC has further developed a test to determine the degree to which leather has been protected with fungicide. This test is carried out over a period of 4 weeks and involves the leather being challenged with mould to determine if it has sufficient protection to prevent rapid mould growth. Please contact [Tracey Faulkner](#) for further details.



Spotlight on..... Leather Verification

Leather and product verification are fundamental tests, vital for retailers and suppliers to give confidence in their products by ensuring they are correctly labelled. The test involves examining the cross sections of the leather under the microscope and verifying the material against the requirements of BS 2780:1983. Information can then be given on the composition of the material ie 'genuine leather' or 'coated leather'.

For more information please contact [Tracey Faulkner](#) on +44 (0) 1604 679967

BLC TESTING RESPONSE TIMES

Routine Testing/Analytical

- Standard – 5 days
 - Urgent – 3 days (standard cost x 1.5)
 - Very Urgent* – Next day (standard cost x 2)
- Exceptions — Lightfastness & Nickel must be 10 day test due to nature of testing*

Footwear Testing

- Standard – 4 days
- Urgent – 3 days (standard cost x 1.5)
- Very Urgent* – Next day (standard cost x 2)

Shoe Fits

- Standard – 3 days
- Very Urgent* – Next day (standard cost x 1.5)

Problem Solving

- Standard – 7 days
- Urgent * – 3 to 5 days (standard cost x 2)

*subject to availability and problem

US Law Curbs Lead and Phthalates

Please click on image/link for further details



Footwear and Leather

Product Safety and Environment Workshop Sept 17-18, California

Focussing on lead and phthalates and all that footwear companies need to know about materials, testing, and alternatives, as they move to cope with both new laws and customer imperatives. [Link to Agenda and Registration](#)

Product Safety and Environment Workshop

September 17-18, 2008
Long Beach, California



FDRA
Leather Technology Centre

RESTRICTED SUBSTANCE - FACT SHEET

All you need to know about.....

MERCURY

What is Mercury?

Mercury occurs naturally, mostly in the form of sulphides of the compound, and the most widespread accessible source is cinnabar. Metallic mercury is obtained by heating cinnabar in air and condensing the vapour. Metallic mercury is slightly toxic, but salts and compounds of mercury are highly toxic. Organic compounds are more toxic than inorganic compounds. The most well known, highly toxic, example being methyl mercury.

Mercury can occur in a variety of forms such as:

- elemental mercury,
- the mercury (II) cation (dissolved in rainwater, or as the ore cinnabar, HgS),
- organometal compounds such as methyl mercury and dimethyl mercury.

Mercury and its compounds can undergo transformations as a result of biological activity and can become more or less soluble and more or less toxic. For example, low toxicity inorganic mercury compounds are insoluble in water and readily settle out to form sediment. However, bacteria can transform the less toxic inorganic mercury into a highly toxic, soluble, organic form, the most common being methyl mercury. In this form it can be absorbed by living organisms and consequently enter the food chain.

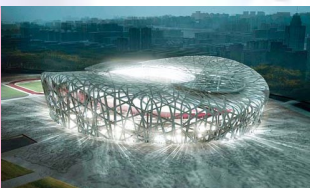
The Toxicity Issues

Elemental mercury is slightly toxic. The Food and Agriculture Organisation WHO Expert Committee have allocated a provisional tolerable weekly intake for adults of 0.3 mg/person or 0.005 mg/kg body weight. In the UK the occupational exposure standards of mercury and mercury compounds (except mercury alkyls) are 0.05 mg (as Hg) per m³ long term and 0.15 mg (as Hg) per m³ short term. Mercury can have an effect on many systems within the body such as respiratory, cardiovascular, haematological, immune and reproductive systems.

Industrial Uses

Mercury is used in a number of industrial applications, in the electrical industry and in the medical professions. The form in which mercury is used, (whether as elemental mercury or as a compound), is dependant upon the industrial process. Mercury thermometers and dental amalgams are medical applications that many people will be aware of. There is concern over dental amalgams and this relates to the evaporation of elemental mercury.

Non-medical uses of mercury include its presence in a variety of products: cleaning solutions, preservatives, paints, and anti-fouling agents for wood and other surfaces. In addition to the release of mercury to the environment as a result of the manufacture or use and disposal of these products, mercury contamination of the environment will also occur in high concentrations in the areas where cinnabar is mined. Mercury is widely used in the manufacture of mascara. In 2008, Minnesota became the first state in the US to ban intentionally added mercury in cosmetics, giving it a tougher standard than the



CHINA LIFTS UK HIDE SKIN AND LEATHER BAN

Following a year of effort from the British Embassy in Beijing, UK industry representatives and the International Animal Health Team in Defra, the Chinese authorities have recognised the UK's FMD free status and have removed their FMD related import restrictions on livestock and livestock products including hides, skins, pickled pelts and wet blue. An extract from a statement from the Chinese authorities reads "Herein the OIE (World Organisation for Animal Health) has already recognised UK as being free from Foot and Mouth Disease (FMD) without vaccination and on the basis of the risk assessment result China has conducted on the UK FMD situation, China allows the importation of artiodactyl and its products that meet Chinese relevant laws and regulations; and the products must be produced and manufactured after this issue date. The joint notice No. 896 from Ministry of Agriculture and AQSIQ is abolished today."

The following export health certificates, with revised guidance notes, are now available from Animal Health Offices.

Export of sheep skins to China [5725EHC] & Export of cattle hides to China [6268EHC]

Historically, mercury has had many uses and has often been applied in the course of medical treatments. As knowledge advances, it has become apparent that what was once considered a safe and useful material is actually toxic and that the form in which the mercury is found influences its toxicity.

As a result, it is no longer used in some of the applications that it once was. The potential for mercury or its compounds to undergo change in the environment, for example the bacterial conversion of less toxic mercury or mercuric salts to highly toxic organo-mercury compounds, illustrates that discharges should not be considered "acceptable". Materials being discharged may be of low toxicity, but could be subsequently transformed by other, natural processes.

Environmental Impact

Mercury can enter the environment in a number of other ways, not only as a result of human activity. Volcanic sources, for example, emit an estimated global total of 60,000 kg of mercury per year. This is twice the estimated human release of 30,000 kg of mercury, which comes from the combustion of fossil fuels and other forms of incineration as well as other industrial emissions related to the use or manufacture of mercury or mercuric materials.

Sediments near pulp and paper works, for example, are known to contain high levels of mercury if the paper has been bleached with chlorine or sodium hydroxide (elemental mercury is employed in the manufacture of these bleaching chemicals). Biomass accumulates mercury and forest fires can also be a source of mercury release to the atmosphere. Sea water contains mercury in both the elemental form and in the ionic form. There is some evaporation of elemental mercury from the surface of the sea.

The importance to the leather industry

Whilst there is no direct legislation to restrict the presence of mercury in leather on a European scale, it is listed as a restricted substance of relevance to leather. This is most likely due to the fact that organo-mercury compounds can be used as a bacterial and mildew process for some textiles. There may also be the potential for contamination from poor quality sodium hydroxide if it is used in processing.

One legislative area with potential impact on the leather industry is the inclusion of mercury in the substances restricted by the EU Safety in Toys regulations and EN71-3. This restricts the extractable levels to 60ppm in any child appealing product. Mercury is also listed in the RoHS directive, which restricts its presence (along with other substances) in electrical equipment. In this case, there are not likely to be any issues with respect to the leather as the limit is 0.1% by weight.

In addition to the legislative issues, there are several Eco-labels that limit the presence of mercury in leather and textiles. These have strict limits which are typically set at 0.02ppm (20mg of mercury per kg of leather) of extractable mercury (using an acidic perspiration solution).

Conclusions

Mercury levels in the environment are a cause for concern for the population due to the toxicity and bioaccumulation issues. Whilst this is not an area of specific concern for the leather industry it is important to be aware of the restrictions in place. Whilst legislative limits are relatively high, the limits set by Eco-labels are very strict and samples could potentially fail these requirements due to a simple contamination problem.

For further information contact [Laura Robinson](#)

BLC Training dates.....

an opportunity not to be missed

Introducing 2 courses to be held in conjunction with **APLF** at the All China Leather Exhibition, Shanghai...

Leather Working Group Workshop **4th Sept**

One Day Understanding Leather **5th Sept**

Contact Susanna Chu at conference@aplif.com

Half Day Restricted Substances **9th Sept**
Workshop— How safe is your leather?

Consumers are concerned by articles in the press referring to the presence of substances such as fungicides and allergens. As responsible retailers you need to understand how to manage risks effectively, prevent claims and brand damage. BLC are holding a half day workshop to understand these substances, their origin and prevention for retailers.

1 day Garment Construction, **18th Sept**
Cleaning & Aftercare - LONDON

This course gives an in depth explanation of different hides and skins and their suitability for purpose for garments. Aimed at people who would like a further insight to standard leather types and how they perform in the fashion market. It will allow you reduce problems or customer complaints through clear supplier specifications.

2 day Understanding **23-24th Sept**
Automotive Leather

- Global view of the raw material supply and traceability
- The leather-making processes in detail
- The importance of specifications, with particular reference to automotive and other transportation leathers
- Laboratory demonstrations and problem solving

The course will focus on automotive leathers, but will also highlight the specification-related differences for aviation, marine and rail applications.

For further information contact
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Melanie Spence on +44 (0)1604 679941
Alternatively visit our training pages at
www.blcleathertech.com

Heel fatigue—Is your business aware of the potential risk and cost associated with the current fashion for high heeled shoes?

A recent item in the press proved costly for one retailer when a heel snapped causing injury to the customer, who went on to win a significant compensation claim.

Stiletto design specifications vary. The heel needs to be high, tapered and thin with a tension pin running through it. This all contributes to the aesthetics for the wearer, but what about the safety implications involved with this design? The majority of tests carried out on high heels are deemed to be safety critical due to the chance of personal injury that can result from faulty items.

The (BS EN ISO 19956:2004) heel fatigue test simulates walking by subjecting the heel to repeated impacts. Failure can be due to incorrect choice of material, inaccurate reinforcement due to air cavities near the top of the tension pin, incorrect positioning of the tension pin or poor design of the heel stem (either too thin or too long).

Another crucial test for high heels is the attachment strength of the heel to the main body of the shoe (BS EN 12785: 2000). The repeated impacts caused by normal walking can cause weakening and loosening of the grindery attachment. The incorrect placement of the heel grindery, inappropriate choice of component or insufficient number of nails used can all contribute to one of the more serious causes of wear complaints.

BLC can carry out a series of tests which reproduce the failures often found in wear. High heels can be fragile in wear, particularly if the basic safety critical tests have been ignored.

Testing with BLC can help to ensure that all of these aspects are covered.

For further information on BLC Leather Technology Centre testing and services contact [Tracey Faulkner](mailto:Tracey.Faulkner@blcleathertech.com) or +44 (0)1604 679967



Coming up next time.

All you need to know aboutPFOS/PFOA

Disclaimer BLC Leather Technology Centre Ltd has made all reasonable efforts to ensure the accuracy of the information provided. However, the information should not be relied upon as legal advice or regarded as a substitute for legal advice. Due care and attention should be exercised when using this information.

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LEATHER IN RETAIL SEMINAR AND DINNER 2008



Wednesday 19th November 2009

Leathersellers' Hall, London EC3A

- **Positive aspects of leather**
- **How green is your leather?**
- **How safe is your leather?**
- **Global manufacturing trends**
- **End of life**
- **Quality Assurance**

BUILDING CONFIDENCE IN LEATHER

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