

Welcome to Leather Update.....

Nov 2008

As November draws to a close you can almost smell the mince pies. This latest edition of Update offers an article on Formaldehyde, vital information on REACH, breaking news regarding CPSC approval for lead testing at BLC and an opportunity to book on the Mould Workshop on 2 December or the last 1 Day Understanding Leather Course of 2008. Don't forget that we are open for testing over the Christmas period.



Spotlight on..... Problem Solving

No matter how well production processes are managed and controlled, leather problems and leather faults do occur. It is essential that leather faults are identified and resolved rapidly and efficiently.

Leather manufacturers, retailers or consumers can send leather or product to BLC to identify the cause of leather problems. Once identified technical input can be provided to solve the problem or issue. This can take the form of telephone or e-mail support through to provision of expert on-site assistance anywhere in the world.

Areas covered under the works problems section:

- **Colour Migration**
- **Spue**
- **Mould**
- **Finish Problems**
- **Adhesives**
- **Foil Leather**
- **Discolouration**



Our objective is a fast, accurate and independent response and we focus on providing an answer to problems within a five to seven day period.

For further information contact
Mark Gummer on +44 (0) 1604 679943



US Consumer Product Safety Commission

▶ Consumer Safety ▶ About CPSC ▶ Library - FOIA ▶ Business

BLC RECEIVES CPSC APPROVAL FOR LEAD TESTING

A new bill has just been signed into US law. The Consumer Product Safety Improvement Act (CPSIA) of 2008 (HR4040) targets lead in children's products giving new limits, and also gives a lower restriction for lead in paint and surface coatings. The law covers mandatory Consumer Products Safety Commission (CPSC) approved third party testing and the use of tracking labels and product registration cards. All effective dates for requirements are based on the enactment date of August 14, 2008.

BLC is pleased to announce CPSC approval as an accredited laboratory for the 16CFR1303 lead testing standard.

BLC Leather Technology Centre Ltd
CPSC Identification Number for this Laboratory: 1050

For further information contact
Tracey Faulkner on +44 (0) 1604 679967

DON'T MISS - MOULD IN LEATHER WORKSHOP

2 December 2008 (9.30 to 12.30) at BLC, Northampton

Aimed at all areas of the leather supply chain

This workshop will look at
CAUSES, PREVENTION, HELP AND SUPPORT

Contact Melanie Spence on +44 (0) 1604 679941

RESTRICTED SUBSTANCE - FACT SHEET

All you need to know about.....

Formaldehyde

Introduction

Formaldehyde is a chemical compound (also known as methanal) that is widely used in many industries. It is the simplest aldehyde chemically with the formula H_2CO . Formaldehyde is a gas at room temperature, but it is also readily soluble in water (and is often sold as an aqueous solution).

Areas of its application include adhesives, textile processing and as a preservative in some paints, coating products and also in some cosmetics. Formaldehyde is also used in the production of some polymers. When combined with phenol, urea or melamine, formaldehyde produces a hard thermoset resin. It is also used during embalming processes to preserve corpses.

Potential exposure routes for formaldehyde are as wide ranging as smog, cigarettes and tobacco smoke, and some household sources such as fibreglass, carpets, foam in cushions, permanent press fabrics, paper products, household cleaners, shampoos, bubble bath, medicines and disinfectants.

Why is it restricted?

The use of formaldehyde in many construction materials means that it is a common indoor air pollutant. At concentrations above 0.1 mg/kg *in air*, inhaled formaldehyde can irritate the eyes and mucous membranes, potentially resulting in watery eyes, headache, a burning sensation in the throat, and difficulty breathing. Formaldehyde is also classified as a carcinogen.

How is it relevant to leather?

Historically, formaldehyde has been used as a tanning agent due to its ability to crosslink proteins such as collagen. In addition, it has been used (again historically) to cross link protein finishes such as casein.

Formaldehyde or materials that are formaldehyde release agents may, however, be used in some areas of tanning, specifically in the production of wet white, to allow stabilisation prior to splitting or shaving and in the production of syntans.

In modern processing, formaldehyde can be used in the manufacture of certain polymeric-based synthetic tanning agents. Its presence in leather may be as a result of the condensation residue from some synthetic tanning agents.

Theoretically, formaldehyde should be fixed to the collagen during processing (considering that formalin is used as a preservative because of its reactivity with protein). However, some of the reactions used in the preparation of syntans are reversible (eg production of melamine formaldehyde resins). This means that, under certain conditions, it is possible that formaldehyde is liberated. Also oxidation of oils/fats can result in formaldehyde formation.

Practical advice on avoiding formaldehyde formation (as determined by the current industry test methods) includes:

Avoiding formaldehyde releasing compounds, for example:

- Aldehyde tanning agents
- Formaldehyde resin retannages
- Preservatives (formaldehyde can sometimes be used as a preservative in processing chemicals)
- The use of oxidisable oils should be avoided as these can oxidise on exposure to air, moisture and heat, resulting in possible formaldehyde formation.
- Adding reducing agents to the float (such as sodium metabisulphite) may help avoid formaldehyde liberation.

What is the legislation?

Restricted substance legislation is highly variable depending upon the final application of the leather in the product and the target user. Also there are considerable variations in legislation depending on the country where the leather or product is manufactured or sold. Formaldehyde is one of the key examples of how variable the restrictions can be.

Within Europe there is no general legislation that limits the presence of formaldehyde in leather. There are some individual countries that have restrictions on its presence in consumer products and formaldehyde is restricted within the recently published EN71-9 Toy standard. Various Eco-labels require that levels of formaldehyde are determined, and the automotive industry tends to have quite strict limits on formaldehyde release from car interior materials.

Table 1 lists some of the limits currently in place for formaldehyde.

Standard	Limit Allowed (mg/kg)		
	Adults/ General	Children/ Babies	Direct skin contact
EU Directive 88/378/EEC – Safety in toys		Restricted in certain toy products	
Austria & Germany			Levels >1500 must be declared and labelled
China	300	20	75
Finland	300	30	100
Japanese Law	300	20	75
Netherlands	Levels >120 must be declared and labelled		
Norway	300	30	100
Poland	300	30	150
EU ECO Label for footwear	150		
SG Mark	150	50	N/A
Okotex	300	20	75
TUV Toxproof	300	20	75

In addition to these restrictions on the extractable levels of formaldehyde present in leather, there are also some Eco-labels (Blue Angel for example) that have restrictions on the volatile formaldehyde released from leather and products.

BLC guidelines are that leathers should contain no more than 200 mg/kg of formaldehyde for articles in general use. If the item is in direct skin contact this should be 75mg/kg, and 20mg/kg for items used by babies (<36 months).

Typically, with modern tanning techniques leathers contain 400 mg/kg or less. As far as BLC is aware there have been no incidences of any person having any adverse reaction to contact with leather containing formaldehyde at these levels. The target of 200 mg/kg is at a level that should be easily attainable for industry with the use of modern process techniques. It is also in accord with most standards where there is no direct and prolonged skin contact.

The figures quoted should also be put into context with levels allowed within other industries. In fact, the level of formaldehyde allowed in cosmetics (Directive 76/768/EEC) is 2000 mg/kg and formaldehyde is allowed as a preservative in oral hygiene products at 1000 mg/kg.

Methods of analysis

There are three separate methods used in the leather industry for the analysis of formaldehyde. Their application depends on the final use of the product along with the technical level of the laboratory carrying out the analysis.

The most commonly used methods for analysis are described in DD CEN ISO/TS 17226. This has two parts; a colorimetric method and an HPLC method.

Also used in the leather industry but to a lesser extent is the Japanese method JIS L 1041 - 1983 (revised 1994). This is similar to the colorimetric method listed in CEN ISO TS 17226, with some modifications to the extraction procedure.

In addition, the automotive industry uses a separate analysis based on a headspace extraction technique. Within this method the sample is suspended in a sealed container over a defined amount of water. After heating, any formaldehyde liberated by the leather should be dissolved in the water. This resulting solution is then analysed colourimetrically. Acceptable limits for automotive leather as analysed by this method are typically 10ppm.

Conclusions

Testing of formaldehyde in consumer products is not straightforward. Even within a single material, such as leather, there are several testing methods that can be applied.

Please contact [Vikki Addy](#) on +44 (0) 1604 679953 for further information on this and other restricted substances.

BLC Training Courses 2009

New course dates and information are now available.

For further information, visit www.blcleathertech.com

Or contact Melanie Spence
+44 (0) 1604 679941

Look out for details of training courses to be held in Asia

IS YOUR BUSINESS REACH READY?

As a supplier or retailer of products into EU markets.....

- Are you struggling with the implications of REACH?
- Are you aware of your immediate obligations under the REACH regulations?
- Do you need support and advice?

BLC are offering confidential 'one-to-one' briefing sessions to discuss how to navigate your way through the complexities of REACH in relation to your business needs.

For further information on REACH, or to book an appointment please contact:

Melanie Spence or +44 (0)1604 679941

Reach pre-registration deadline - 30th November

The main points for those producing articles to be aware of :

- Products marketed to **intentionally** release chemicals. For example indigo dyes in jeans or scented clothing.
- Articles containing **substances of very high concern** (SVHC) over 0.1% weight and present above 1 tonne per year.

Those articles to which one/both of the above apply probably need to pre-register, in which case you have until the 30th November 2008—NOW!

BLC are putting together a package to help and assist you with any questions you may have on this far-reaching and comprehensive new legislation.

Please contact Vikki Addy on +44 (0) 1604 679953

Coming up next time.

All you need to know about antimony...

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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Effective leather sourcing conference

30 March 2009

Hong Kong Convention and Exhibition Centre

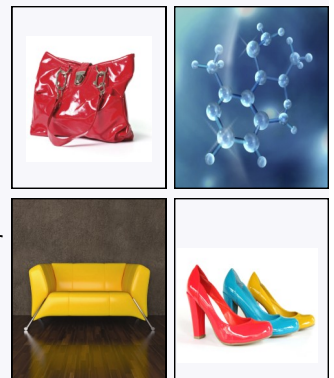
BLC and APLF Ltd will be organising a conference in Hong Kong on 30 March, the day before the Asia Pacific Leather Fair and Fashion Access (31 March to 2 April 2009).

This half day event will be focus on topical issues of importance for the global leather supply chain.

Presentations will include a market update by

Deloitte.
德勤

For further information contact Adam Hughes on or +44 (0) 1604 679936.



LAST TRAINING DATE IN 2008 to meet customer demand

1 Day Understanding Leather - 9 December
Ideal for those new to the industry and also for designers, buyers and retailers of leather products, this course offers the perfect grounding of information and knowledge on leather as a material.

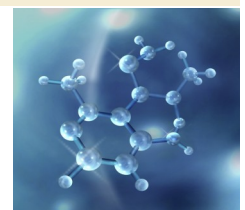
Contact Melanie Spence or +44 (0)1604 679941

Testing over the Christmas Period

Just a reminder that BLC will be open on the following dates over the Christmas period to perform testing and provide any support you may need

- 22-24th December
- 29-31st December
- 2nd January

Please contact: info@blcleathertech.com for assistance with testing required during this period.



training

2009



Leather



Leather upholstery repair and automotive



Footwear



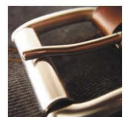
Garments



Leathergoods



Hardware



Safety and sustainability



Leather technology and finishing



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