BRITISH COATINGS FEDERATION

Lead in painted surfaces

Repainting and removal

Guide for professional decorators

British Coatings Federation
email: enquiry@coatings.org.uk · www.coatings.org.uk
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Contents

1. Purpose of this document

Lead pigments were taken out of most paints in the 1960s and lead pigments and driers (at very low levels) were completely removed from decorative paints by the early 1980s. Many wood or metal surfaces painted before the 1960s could contain significant levels of lead.

Lead pigments, either as a white pigment (lead carbonate/lead sulphate) or sometimes as a colouring pigment (yellow and red lead chromes) were widely used in decorative paints applied in houses and other buildings (schools, hospitals etc.) prior to the 1960's. Although leaded paint has not been used for many decades old lead painted surfaces can still be found, and can represent a possible source of exposure.

The BCF and our UK decorative paint members want to ensure that the general public, and professional painters and decorators, are fully aware of the potential risks to people in homes, commercial properties and public buildings associated with the renovation of painted surfaces that contain lead. We recommend the adoption of these best practices, protecting decorators and others from the exposure to any disturbed old lead painted surfaces during removal and repainting activities. We have also included a comprehensive set of web links to other organisations, which provide additional support on this subject *(please note that links and mention of third parties do not imply or confer endorsement by the BCF).*

This document is intended for professional decorators; there is an additional simplified document (HS032, available for the general public) from the BCF website.

How to determine if a painted surface contains lead?

To determine whether or not lead-containing paint is present on any particular surface, the paint may be tested by:

(a) an experienced professional decorator with lead expertise;

(b) using a lead test kit, that gives a simple indication of the presence of lead;

(c) a specialist company;

(d) a specialist laboratory.

Please see section 2 (c), (d) and (e) for more details.

2. Hazards associated with lead

Lead is very hazardous to health. It can be breathed in as dust, fume or vapour. It can be swallowed in the form of paint chips, dust or dirt containing lead or in drinking water or in food, especially if you have not washed your hands. It can also be ingested by children sucking e.g. old cots painted with white lead paint.

If the amount of lead in your body gets too high it can cause:

- Headaches
- Tiredness
- Irritability
- Constipation
- Nausea
- Stomach pains
- Anaemia
- Loss of weight

Continued uncontrolled exposure can cause high blood lead levels that can have very serious health consequences, such as:

- Kidney damage
- Nerve and brain damage
- Infertility

Note: These symptoms can also have causes other than lead exposure so they do not necessarily mean that lead poisoning has occurred.

Very young children would be particularly vulnerable to these potential adverse health effects of elevated levels of lead in the blood. Children absorb lead mostly by eating it or touching contaminated dust or soil and then putting their fingers into their mouths.

An unborn child is at particular risk from lead exposure, especially in the early weeks before a pregnancy becomes known.

If you are a woman capable of having children you should take special care to follow good working practices and a high level of personal hygiene. Similarly unnecessary exposure of children to lead should be eliminated as a precautionary measure.

If you think that your health, or the health of any member of your family may have been affected by lead you should contact your local doctor immediately or call the relevant NHS non-emergency helplines on:
England – NHS non-emergency service = **111**
Wales – NHS Direct Wales = **0845 4647**
Scotland – NHS 24 = **111**

3. References and Resources on lead in paint

i) UK government advice

HSE

The best leaflet for professional decorators to refer to with regard to working safely with lead, the risks involved to human health, and employer responsibilities, is the HSE leaflet 'Lead and You' INDG305 (version 2 published August 2012), which can be found at http://www.hse.gov.uk/pubns/indg305.pdf.

There is also a page on the website specifically dedicated to lead as a hazardous substance in construction environments - http://www.hse.gov.uk/construction/healthrisks/hazardous-substances/lead.htm. A simple overview of the issues related to lead paint may be found in the HSE leaflet CIS 79, 'Old lead paint – what you need to know as a busy builder' - http://www.hse.gov.uk/pubns/cis79.pdf

Although not specifically mentioning dust from lead paint, the best practice guidance provided in the leaflet CIS 36 'Construction dust' - http://www.hse.gov.uk/pubns/cis36.pdf, should also be used as a reference. There are increasing concerns with regard to the creation of lead paint dust during the demolition of buildings, or through using dry sanding rather than wet sanding techniques.

With regard to legislation, the Construction (Design and Management) Regulations 2015 (CDM 2015) came into force on 6th April 2015 (HSE publication L153) - http://www.hse.gov.uk/pubns/priced/l153.pdf. Lead paint is specifically mentioned as a hazardous material, and needs to be included when preparing a health and safety file for any construction project.

Also, the Control of Lead at Work (CLAW) Regulations 2002 (SI 2002/2676) came into force in November 2002. Further detailed information on these regulations, can be found through the following link to the HSE website (their 118-page document L132) - http://www.hse.gov.uk/pubns/priced/l132.pdf, with an Approved Code of Practice and guidance information. Paint stripping and blast removal / abrasion of lead painted surfaces are listed under activities that may result in significant exposure. Full details are provided with regard to recommended practices to ensure minimum exposure and the safe treatment of lead-painted surfaces.

Defra

The primary general reference document for the public on working with surfaces previously painted with lead-based paints is the Defra publication, 'Advice on lead paint in older homes' - **www.gov.uk/government/publications/advice-on-lead-paint-in-older-homes**

This is a 2-page Defra leaflet that was last updated on 1st April 2013 (ref. pb10973), and provides a straightforward introduction to the subject, and recommended methods to treat lead painted surfaces safely, if action is required. It also contains the following contact number and links:-

Defra helpline - 08459 33 55 77

helpline@defra.gsi.gov.uk

In addition, there is a Defra page specifically focussed on the health effects of lead:-

https://www.gov.uk/government/publications/lead-properties-incident-management-and-toxicology

This contains 4 documents, last updated on 1st July 2014 – a brief general information document on lead (with a good FAQ section), an incident management document, a toxicology overview, and a complete document which combines these first three into a single document.

ii) Construction industry advice

The following organisations provide specific advice with regard to how to safely work with lead painted surfaces that require maintenance:

Association for Project Safety – www.aps.org.uk

Practice note 1/15 on Lead paint, lead dust and CDM,
http://www.aps.org.uk/sites/default/files/115%20APS_Lead_Paint_Practice_Notes.pdf

The Construction Industry Training Board (CITB) 2016 – www.citb.co.uk

GE 700 Construction Site Safety – Health and Welfare, interactive forms for general use

http://www.citb.co.uk/publications/companion-websites/ge-700-companion/checklists-and-forms/

GB02 – Lead hazards checklist

GB03 – Lead-containing paint risk assessment

GB04 – Lead health surveillance record

The CITB also leads the Construction Dust Partnership, whose aim is

'To raise awareness within the construction industry about lung diseases related to hazardous workplace dust and to promote good practice to prevent these diseases, particularly for those undertaking high risk tasks' - http://www.citb.co.uk/health-safety-and-other-topics/health-safety/construction-dust-partnership/

There are also a number of publications available from overseas, especially North America, such as Worksafe BC's 'Lead Containing Paints and Coatings, preventing exposure in the construction industry' - http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/LeadContainingPaintCoatings.pdf, and 'Lead in Construction' from the Occupational Safety and Health Administration in the US - https://www.osha.gov/Publications/osha3142.pdf.

iii) Specialist companies providing advice on lead paints

The following specialist companies can conduct checks for lead paint and lead dust:- **Lead Paint Safety Association** (LIPSA), telephone 0844 544 6187, e-mail info@lipsa.org.uk website www.lipsa.org.uk

Lead Test Home Analysis Service, telephone 0131 669 8770, (0790 194 1954), e-mail contact@leadtest.co.uk, website www.leadcheck.co.uk

Envirohive, telephone 01276 501439, e-mail info@envirohive.co.uk,

website www.envirohive.co.uk/leadpaint.html

iv) Specialist laboratories that can test paint samples

The best way to identify a suitable and convenient specialist laboratory is to contact the **United Kingdom Accreditation Service** (UKAS), telephone 0208 917 8555 website www.ukas.org.

Insert the word 'lead' into the search facility under the 'testing labs' tab. There is also an additional postcode search facility on top of this, which will list the most local labs first.

The following labs can provide a rapid assessment of paint samples:-

BLC (British Leather Technology Centre), telephone 01604 679999, website www.blcleathertech.com/testing-services/paint-lead-testing.htm

Eurofins Laboratories, telephone 0161 868 76 00, email ProductTesting-MA@eurofins.com website www.eurofins.com/product-testing-services/industries/chemical.aspx

LPD Lab Services, telephone 01254 676074, website

http://www.lpdlabservices.co.uk/consultancy/health_and_safety_consultancy/lead_(pb)_in_paint_analysis.php

Sandberg Laboratories, telephone 020 7565 7070, email mayers@sandberg.co.uk, website www.sandberg.co.uk/laboratories/chemistry/lead-in-paint.html

v) How to source lead test kits

These kits are available from a number of manufacturers such as 3M, Nitromors, Abotex and Pro-Lab. If the instructions for use are followed carefully, and the test paper shows a positive response then lead is present. However as the test is not necessarily 100% accurate a negative reading should not be relied upon to show the absence of lead and if you think there could be lead present then a professional test should be carried out (see sections (c) & (d) above).

Although the main DIY outlets in the UK no longer stock these kits as a regular item, they are available through specialist decorator centres (e.g. Brewers) and on-line through e.g. e-bay: - **http://www.ebay.co.uk/sch/i.html?_nkw=lead+paint+test**

There are also more general lead kits available through healthcare outlets, such as Novadetox and their Osumex kit - www.novadetox.co.uk/acatalog/lead-poisoning-test.html

The following organisations may also assist with supplying test kits:-

Lead Paint Safety Association, telephone 0844 5446187, e-mail info@lipsa.org.uk , website www.lipsa.org.uk

Heritage Testing Limited, telephone 01273 891785, email enquiries@heritagetesting.co.uk, website www.heritagetesting.co.uk

Lead Test Home Analysis Service, email contact@leadtest.co.uk, website www.leadtest.co.uk

Lead Check can provide 3M Lead Check Swabs order online from www.leadcheck.com (USA)

vi) How to find a professional decorator with experience with lead paint

The following organisations should be able to assist with identifying a professional decorator with expertise in handling painted lead surfaces:-

Painting and Decorating Association, 32 Cotton Road, Nuneaton CV11 5TW
telephone 0247 635 3776, e-mail info@paintingdecoratingassociation.co.uk
website www.paintingdecoratingassociation.co.uk

Scottish Decorators Federation, Castlecraig Business Park, Stirling FK7 7SH
telephone 01786 448838, e-mail info@scottishdecorators.co.uk
website www.scottishdecorators.co.uk

The Guild of Master Craftsmen, 166 High Street, Lewes BN7 1XU,
telephone 01273 478449, website www.guildmc.com

4. Removal & renovation of lead-painted surfaces – detailed best practice

Whilst lead is hazardous to health it is important to realise that there is only a risk if the paint film is unsound or disturbed.

If the lead-containing painted surface is in good condition and/or is already protected (over-coated) with a non-lead containing paint and is maintained in a good condition then removal could result in a greater exposure to lead dusts and particles than would otherwise occur from leaving the paint undisturbed.

Old lead painted surfaces should only be treated or removed if the paint (film) is flaking or chipping away or if dusts and particles are present or if there is the possibility of the painted surface being chewed or sucked by children.

The precautions outlined below are recommended for both professional decorators and DIY decorators. DIY decorators who are in any way uncertain about their ability to follow these precautions should consult a professional decorator.

i) Introduction

It is important that the following precautions are taken when renovating/removing old lead paint.

a) Avoid creation of lead-containing dusts or fumes.
b) Prohibit anyone not involved in the work from the area, and preferably the building until the area has been thoroughly and effectively cleaned.
c) Ensure no children or pregnant women are present in any area where renovation work which involves the disturbance of lead-containing surfaces is taking place.
d) Do not smoke, eat or drink in the work area.

ii) Preparation

It is advised that the following steps are taken prior to starting work.

a) Remove furniture, curtains and soft furnishing as far as possible. If this cannot be done, cover these and other permanent items (including flooring) with plastic sheeting sealed with heavy duty tape. Beware of slipping on these surfaces.
b) Keep people out of area.
c) Wear overalls, particulate filter face mask, and rubber or latex gloves within the work area, and remove them before leaving the area.
d) For outside working contamination of the soil should be avoided. Cover all grass, garden beds etc. within the near vicinity with plastic sheeting. Avoid working in windy conditions.

iii) Removal

To remove the old lead-containing paint, carry out one or more of the following:-

a) To prepare surfaces in good condition (no flaking, loss of adhesion from the underlying surface) for repainting the surface should be rubbed down wet with waterproof abrasive paper to provide a key for new coat(s) of paint. The debris from rubbing down should not be allowed to dry out and form dust. It should be removed

with a damp cloth and the cloth, abrasive paper and any other debris placed in a plastic bag, sealed and disposed of. Avoid any dust creation.

b) In the case of walls and ceilings these can be best treated with wallcoverings or lining paper after a) above.

c) To completely remove paint in a poor condition;

Either: Use a chemical paint stripper, ensuring that all instructions on the container are carefully followed. A suitable face mask to protect from fumes might be required. Such masks will NOT protect against dusts and should not be used for such purposes.

[For stripping doors a specialist stripping company, which can remove the paint safely and completely in stripping baths, can be used.]

Or: Use a paint scraper and wet abrasive paper, both these operations should be carried out after wetting the surface and the surface should be kept wet throughout to avoid dust and flakes becoming air-borne. The debris from scraping and rubbing down should not be allowed to dry out and form dust. It should be removed with a damp cloth and the cloth, abrasive paper and other debris placed in a plastic bag, sealed and disposed of.

Or: Use Infra-Red (IR) stripping equipment to soften the paint film sufficiently to be able to scrape it off. The softened paint should be scraped immediately into a suitable container before it re-hardens. A suitable face mask to protect exposure to lead-containing dusts may be required. Any subsequent surface preparation should be done wet with waterproof abrasive paper.

Or: Use a hot air gun to soften the paint film sufficiently to be able to scrape it off. The softened paint should be scraped immediately into a suitable container before it re-hardens. A suitable face mask to protect exposure to lead containing dusts may be required. Take care that the paint does not burn. Any subsequent surface preparation should be done wet with waterproof abrasive paper.

iv) Clean up

Thoroughly wash all surfaces, both those from which lead containing paints have been removed and others in the work area. Allow to dry before applying new paint, or wallcoverings to walls and ceilings. Vacuum all surfaces with a vacuum cleaner fitted with a high efficiency particle air filter (HEPA). Many vacuum cleaners are fitted with HEPA filters and are marked as such.

Dispose of all debris, including masks and filters in plastic bags and seal with tape – householders should place these bags in the normal dustbin.

Clean up all debris frequently, as well as at the end of each day. Remove all debris from the work area before redecorating.

DO NOT burn or incinerate lead-containing wastes.

5. Guidance provided to the general public in the BCF document HS 032

a) Recommended step-by-step approach

Step 1 – Do you suspect that lead may be in the painted surface you are renovating?

- No……> decorate as normal practice
- Yes…..> test the surface (see section 4 below)

Step 2 – Has the presence of lead been confirmed?

- No……> consider further (professional) testing, before proceeding as normal practice
- Yes…..> consider employing professional decorators

If you decide to proceed with decorating a lead-painted surface yourself…..

Step 3 – Is the surface in good condition, or overcoated with a non-lead paint layer?

- Yes…..> don't disturb the surface, paint over as normal practice
- No……> prepare the area for activity.

1. Remove all furniture, curtains and soft furnishings.
2. Cover all exposed surfaces (including floors) with plastic sheeting, seal with tape
3. Use Personal Protective Equipment - overalls, rubber/latex gloves, particulate filter mask

Step 4 – Treatment of old lead paint surface

1. If the surface can be prepared without needing complete removal, rub down wet with waterproof abrasive paper & make sure the debris does not produce a dust.
2. If the whole paint film needs to be removed, use a standard paint stripper and wet scraping and abrasion. Infra-red stripping or a hot-air gun may be used to soften the film, with caution – do not burn the paint or create paint fumes.

Step 5 – Clean-up, removal and disposal of debris

1. Wash all surfaces (the specific work area and all surrounds) thoroughly
2. Vacuum all surfaces with a vacuum that has a HEPA filter
3. Carefully dispose of all debris, including face masks and all filters, in a heavy duty plastic bag, ensure that this does not get damaged in transit to the dustbin.

b) Do's and Don'ts

DO

Test the painted surface if you suspect that lead may be present, especially if you are renovating an old house (> 40 years old)

Consider employing a professional decorator if old lead paint is present

Keep any dust creation during surface preparation to an absolute minimum

Use chemical stripper or wet abrasive paper to remove the paint, if removal is necessary

Wear the recommended personal protective equipment (PPE)

Thoroughly clean up the whole area after paint removal has been completed

X DO NOT

Remove paint if it is in a sound condition, especially if the lead paint is not the top layer – overcoating is the safest option to prevent exposure

Allow bystanders, not involved with the renovation work, to remain in the area / room

Use dry abrasive paper or techniques to remove lead paint

Create any dry paint dust during the whole process, keep all debris wet

Use blow lamps or gas torches to strip the paint

Create lead fumes by over-heating lead-containing paints

Burn or incinerate lead-containing waste