

The South African Paint Manufacturing  
Association and Training Institute



# **Lead in painted surfaces Guide on repainting and removal for DIY and professional painters and decorators1**

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## 1. INTRODUCTION

South African decorative paint suppliers want to ensure that the public and professional painters and decorators continue to be aware of the potential risks in homes, commercial properties and public buildings that are associated with exposure to old painted surfaces that contain lead.

The adoption of the best practices, which protect decorators, and others likely to be affected by exposure to any disturbed old lead painted surfaces, is a key requirement in the process of removal and repainting activities.

Professional painters and decorators should comply to the Hazardous Substance legislation pertaining lead in paint levels in line with International and the World health organisation (WHO)

## 2. EFFECTS OF LEAD EXPOSURE

Lead is 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.

Lead contained in old lead painted surfaces cannot be absorbed through the skin.

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.

### **3. HOW DO I KNOW IF THERE IS LEAD ON PREVIOUSLY PAINTED SURFACE?**

Lead pigments have been removed from most paints as have lead based driers. Many surfaces painted before the 1960s could contain significant lead; although this applies mainly to wood and metal surfaces.

Lead pigments, either as a white pigment (lead carbonate/lead sulphate) or sometimes as a colouring pigment (lead chromes) were widely used in decorative paints applied in houses and other buildings (schools, hospitals etc.). 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.

To be absolutely certain whether or not lead-containing paint is present on any particular surface, the paint needs to be tested by a specialist laboratory (a), a professional decorator (b) knowledgeable about the subject or a specialist company (c). Lead test kits, that give a simple indication of the presence of lead, are available from some retailers and trade counters and directly from distributors (d). 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 quantitative test should be carried out

### **4. WHAT SHOULD BE DONE?**

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 should be carefully followed by both professional decorators and by DIY users. Do-it-yourselfers who are in any way uncertain about their ability to follow these precautions should consult a professional decorator.

## **5. PRECAUTIONS – REMOVAL AND RENOVATION OF OLD LEAD CONTAINING SURFACES**

### **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 – see: i) Introduction (above).
- c) Wear overalls and rubber 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/redecoration**

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 prior to redecoration**

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 dustbin. Professional decorators should dispose of the waste in accordance with the Environmental Protection (Duty of Care) Regulations 1991 (and amendments). Lead-containing wastes do not fall within the definition of special wastes, but the Environment Agency may classify them as such. Professional painters are advised to check with their local waste regulator on appropriate disposal routes.

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.

#### **6. KEY DO'S AND DON'TS**

**If paint is in sound condition do NOT remove it, especially if the lead paint is not the top layer – just overcoat**

**If in doubt check whether old lead paint is present (see 3 above)**

**Keep anyone not carrying out the work out of the area**

**Keep dusts to a minimum – only use wet abrasive paper**

**Do NOT use blow lamps or gas torches to strip paint**

**Do NOT create lead fumes by over-heating lead containing paints**

**Wear protective clothing and masks (if required)**

**Clean up thoroughly after the removal of old lead paint**

**Do NOT burn or incinerate lead-containing wastes.**