

Working with Lead – (Process dated 09 06 2016)

The Control of Lead at Work Regulations 2002

Policy

It is the duty of Humphrey & Stretton to comply with the requirements of The Control of Lead at Work Regulations 2002, as well as any other associated legislation.

The company will also be following the Health & Safety Executive's guideline INDG305(rev2)

General

a) These apply to any substance, natural or artificial whether solid, gas, vapour or liquid and including micro-organisms.

A "Substance Hazardous to Health" means any substance or mixture, which is classified as: -

- Dangerous for supply under the Chemical Hazard Information and Packaging for Supply Regulations 2002- CHIP, or
- (ii) One for which a Workplace Exposure Limit (WEL) has been specified in the schedules of the Regulations or where the Health and Safety Commission has specified a Workplace Exposure Limit, or
- (iii) Hazardous micro-organism, or
- (iv) Dust present in substantial concentration in air, or
- (v) Any other substance, which creates a health hazard comparable with the hazards of i, ii or iii.

Principles of good practice for the control of exposure to substances hazardous to health to be adopted.

- **Design and operate** processes and activities to minimise emission, release and spread of substances hazardous to health.
- **Take into account** all relevant routes of exposure, inhalation, skin absorption and ingestion when developing control measures.
- **Control exposure** by measures that are proportionate to the health risk.
- **Choose** the most effective and reliable control options which minimise the escape and spread of substances hazardous to health.
- Where **adequate control** of exposure cannot be achieved by other means, provide, in combination with other control measures, suitable personal protective equipment.
- **Check and review** regularly all elements of control measures for their continuing effectiveness.
- **Inform and train** all employees on the hazards and risks from the substances with which they work and the use of control measures developed to minimise the risks.
- **Ensure** that the introduction of control measures does not increase the overall risk to health and safety".

Prevention of Exposure

No lead substance shall be used or handled until a suitable and sufficient assessment has been completed. (Risk Assessment attached)

The Company will prevent exposure to hazardous substances wherever possible. Where prevention of exposure is not possible, it will be controlled by suitable protective or preventive measures.

Therefore no substances shall be used for any purpose whatsoever until such risk assessment has been completed and approved.

The typical hierarchy of control measures to be used are – substitution – isolation – local extract – general extract – controlled exposure – hygiene measures. As far as possible, the control will be other than the provision of PPE.

PPE will be issued where other methods do not prevent or adequately control exposure.

If a **Workplace Exposure Limit (WEL)** is specified then the control procedures will be set up so that the level of exposure is, as far as is reasonably practicable, below the WEL. OR if it is exceeded, the reasons will be identified and action taken as soon as is reasonably practical to achieve satisfactory conditions.

Monitoring of Exposure

Where there is exposure to lead material, the exposure levels will be monitored to check on the adequacy of the controls or otherwise protect the health of employees.

Records of any monitoring will be kept for at least five years or where they are representative of the personal exposures of identifiable employees, 30 years from the last dated entry.

Health Surveillance

Where required by the Regulations, employees will be monitored under medical surveillance, if working with substances listed as requiring such surveillance. Similarly, medical surveillance will be maintained: -

- Where there is the risk of exposure to an identifiable disease, or
- Where there is a health effect which may be related to exposure, *and*
- Where there is a likelihood of exposure under the conditions of work. *and*
- Where there are valid techniques for detecting indications of the disease or health effect.

Information Training and Instruction

- All employees will be provided with information, training and instruction relating to lead substances in use by the Company.
- Information will be that provided by the manufacturers or suppliers of the substances or mixture or from in-house documentation.
- Training will be given in the understanding of the Regulations and effects of the various substances, etc. necessary for compliance with the Regulations.
- Instruction will be given in the use, handling or equipment necessary to give emphasis with these Regulations.

Company Requirement

It is necessary that all staff who could have cause to work with lead during their working day are conscious of the requirements under INDG305(rev2).

Such as;

- Working safely with Lead
- When you are most at risk
- How lead can get into your body
- How lead can affect your health
- What an employer must do to protect your health

- How your health is checked at work
- What happens if your blood-lead level is too high?
- What are the blood-lead levels for different employees?
- What you should do to protect your own health?

Overview

The emphasis is, as seen in the works process that follows, it covers, tasks, personal hygiene, housekeeping, staff training and the use of standard and disposable PPE. With staff following process and their training the risks normally associated with lead are diminished.

Lead Quantities

Over the past 12-15 months Humphrey & Stretton have purchased 400m of lead rolls. Each roll is 2.5 m in length. That is 58 rolls of lead. That is the equivalent to using 4.15 m of lead per month.

Lead is only purchased where there is a specific contract which invariably is linked to an NHS contract, e.g. X-Ray rooms

Number of Staff in the company who work with Lead.

Out of 23 work-shop staff, only 5 staff are qualified to work with lead.

Personal Protective Equipment

Staff working with lead, have the following PPE: safety shoes, disposable face masks, safety glasses, disposable gloves, disposable coveralls, barrier cream for hands and arms. Disposable PPE is available in some quantities and staff can avail themselves as to what they require to work safely. Supervisors ensure the wearing of PPE for all staff.

The limited quantity of disposable PPE is incinerated at the end of the lead working day.

Health Surveillance

Health Surveillance is already a safety feature of Humphrey & Stretton. The company who undertake this service is;

Harlow Occupational Health Services limited
Stephen Taylor House
Edinburgh Place
Templefields
Harlow. CM20 2DJ - Phone: 01279 422377

It is the intention of the company to extend the present health Surveillance to include lead-blood level testing for those staff who work with lead- this extended service will provide a bench-mark for those staff who have been working with some limited quantities of lead these past 12 months.

Further to this, and as an extension of the services already provided by Harlow Occupational Health Services, Inhalation exposure monitoring by air sampling would also be undertaken.

In its simplest form, staff are also advised to check themselves monthly for signs or symptoms of possible ill health following a training session on what to look for and who to report symptoms to. For example; employees noticing soreness, redness and itching on their hands and arms.

Work process from receipt of raw material to finished product

Step 1 Receipt of raw material

- A quantity of lead is delivered to Humphrey & Stetton – These tend to be rolls of lead 2.5m in length. Only the number of rolls required for the contract are ordered.
- The rolls are delivered on a pallet and the company's own fork lift truck places the lead, which is all wrapped up, into a section of the workshop where the majority of the lead work is undertaken.

Step 2 1st Preparation of lead sheet

- A roll of lead 2.5m is rolled out manually, which is achievable as the lead material is very malleable and this is done to a point where the sheet of lead is reasonably flat. This piece of lead is then placed in the 'door press' to make the sheet extremely flat. Placing the piece of lead into the press is undertaken by two members of the lead team. Whilst the press is operating, the staff may prepare the next roll of lead for manual flattening.

Step 3

- When the lead pieces in the press to be compressed are sufficiently flat, the piece(s) are moved to an adjacent piece of machinery called the 'spindle', where the lead becomes attached to either a door, door frame or door architrave. The principle material of the door is wood.

Step 4

- For certain aesthetic and safety reasons, the semi-finished doors etc are taken outside to a safe and isolated area from other staff, for the 'door pieces' to be trimmed rather than pollute the main factory floor.

Step 5

- The trimmed doors/frames etc. are brought back in from outside and placed on the company's CNC machine which is located near the press and spindle machine. The CNC is a finishing machine so that wooden door, door frame, and architrave have all received that level of lead covering required by the contract.

Step 6

- All finished items are checked against specification for quality and accuracy of requirement.

Step 7

- Finished products are then stored for collection & delivery to client.

Step 8

- Any lead residue located on the spindle machine or CNC machine is to be cleaned off and the waste, which is minimal, is collected and disposed of.
- Floor areas are also swept of any lead debris disposed of.
- All disposable PPE is collected from the staff and then incinerated.

Hygiene

Humphrey & Stretton require all staff working with lead to be fastidious about their personal hygiene.

- There are company facilities to wash hands and arms as often as is required.
- Staff to use paper towels for drying purposes which can be disposed of more readily. Or warm air driers.
- Once washing/toilet undertaken, new disposable PPE is to be worn (used PPE to be disposed of at end of day)
- Staff must change from disposable PPE to standard dress before eating as well as ensuring that they have washed hands and arms.
- Eating is to be undertaken away from lead environment.
- These rules also include any smoker.

Training

- The company is aware of the need to ensure that all staff are trained to undertake lead related work.
- The company will ensure that there is a sufficient cadre of staff that are suitably trained and that they could fill in on lead related work when or if there is a staff deficiency.
- The company will ensure that staff working in this environment follow laid down procedures
- The company will incorporate any refresher training so required.

Risk Assessment

See separate RAMS for.