

## **Pb (lead) analysis of paint flakes**

**Report No.** COA/05705

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The results contained herein relate only to the items tested.

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## Revision History

Issue number: 02	06/10/2020
Revised by: DP	Authorised by: RE
Reason for revision: Corrected client sample description from 1P to IP on page 4.	

## Sample Reference

Client Sample Description	SOCOTEC Sample Number
Zenova FP	208936
Zenova IP	208937

## Sample and Method Descriptions

Number of Samples Received	Matrix / Sample Description	Method ID	Description
2	Paint Flake	IHM	<b>HOTPLATE DIGESTION</b> – Sample was digested in high-purity concentrated acids, using hotplate assisted heating. Following digestion, the sample was diluted to a known volume with deionised water.
		ASC/SOP/102	<b>OPERATION AND MAINTENANCE OF INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROMETERS (ICP-AES)</b> – Sample was diluted as necessary and analysed by ICP-AES calibrated using certified standards.

## Results

**Table 1: Metal Results in mg/kg**

Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Method ID (ASC/SOP/xxx)		IHM/102	IHM/102	IHM/102	IHM/102	IHM/102	IHM/102
Instrument Limit of Detection		2	6	0.4	2	10	0.6
UKAS		NO	NO	NO	NO	NO	NO
Customer Sample Reference	Laboratory Sample Reference	Al	As	Cd	Cr	Pb	Zn
208936	ASC/46239.001	1000	20	0.5	7	30	780
208937	ASC/46239.002	750	10	<0.4	<2	20	770

**Table 2: Metal Results in %w/w**

Units		%w/w	%w/w	%w/w	%w/w	%w/w	%w/w
Method ID (ASC/SOP/xxx)		IHM/102	IHM/102	IHM/102	IHM/102	IHM/102	IHM/102
UKAS		NO	NO	NO	NO	NO	NO
Customer Sample Reference	Laboratory Sample Reference	Al	As	Cd	Cr	Pb	Zn
208936	ASC/46239.001	0.10	0.002	0.00005	0.0007	0.003	0.078
208937	ASC/46239.002	0.075	0.001	<0.00004	<0.0002	0.002	0.077

## Lead Analysis

The Lead ACOP provides a list of materials and processes that may result in significant exposure to lead. For instance, it infers that working with materials that contain more than 1% total lead (or 10000 mg/kg) is liable to result in significant exposure. Any work activity that may give rise to lead dust should be avoided where reasonably practicable. Such activities include blast removal, dry disk grinding, or cutting with power tools. This shall also apply to COSHH metals where their concentration in paint is reported to be high.

The removal of paint is likely to generate potentially harmful levels of dust. The employer is responsible for controlling the exposure limits by applying measures appropriate to the activity that are consistent with the risk assessment. Measures include, in order of priority:

- the design and use of appropriate work processes, systems and engineering controls and provision of suitable work equipment and materials,
- the control of exposure at source, including adequate ventilation systems and appropriate organizational measures such as reducing the number of employees exposed to lead and the level / duration of exposure, and
- the provision of suitable PPE in addition to the measures above, where adequate controls of exposure cannot be achieved by other means.

Using this report it is the employers responsibility to identify potential risks/hazards involving the metals/materials therein mentioned and ensure that appropriate controls and risk assessments are in place.

For your information the below links may be helpful in doing this.

<http://www.hse.gov.uk/pubns/indg1132.pdf> (CLAW – Control of lead at work)

<http://www.hse.gov.uk/pubns/indg441.pdf> (Arsenic and you)

<http://www.hse.gov.uk/pubns/indg391.pdf> (Cadmium and you)

<http://www.hse.gov.uk/pubns/indg346.pdf> (Chromium and you)

<http://www.hse.gov.uk/pubns/books/eh40.htm> (EH40/2005 Workplace exposure limits)

<http://www.hse.gov.uk/pubns/eh44.pdf> (Dust in the workplace general principles of protection)

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END OF REPORT

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## Signatories

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