REACH Exposure Scenario Ref: (*Klen/PbO/ver.2*)
Title: Use of lead oxides and lead metal as an analytical reagent in the analysis of precious elements
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Relates to products: LITHARGE

Title and covered activities	
1.Short title of the Exposure Scenario	Use of lead oxides and lead metal as an analytical reagent in the analysis of precious elements
2. Processes and activities covered	Sector of Use: SU9 Manufacture of fine chemicals Product Category: PC21 Laboratory chemicals Process Category: PROC 15 Use as laboratory reagent Article Category related to subsequent service life: AC 0 Other: laboratory reagents Environmental Release Category: ERC11a Wide dispersive indoor use of long-life articles and materials with low release
Operational Conditions (OC)	
3. Duration and frequency of Use	PROC 15: Variable, up to 8 hour shifts, five days per week, 52 weeks per year.
4.1 Physical form of substance or preparation	Powder
4.2 Concentration of substance in preparation	10-99% pure substance
4.3 Amount used per time or activity	Kg quantities or less
5. Other relevant operational conditions of use	The assay is conducted indoors in a laboratory setting.
Risk Management Measures (RMM)	
6.1 Risk management measures related to human health (specified for workers or consumers)	Consult Chapter 8 of the safety data sheet for specific recommendations on the use of local exhaust ventilation and personal protective equipment. Assays must be conducted within fume hoods that prevent exposure to lead-containing aerosols. Personal respirators must be worn during conduct of the assay if exposure limits are exceeded. Impervious protective clothing should be worn, as appropriate, to prevent skin contact. Safety goggles and/or full-face shield should be worn where dusting is possible.
6.2 Risk management measures related to the environment	None. Releases to the environment are not expected due to the small scale of the process and ventilation controls.
7. Waste management measures	None.

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References to exposure estimation

8. Exposure prediction and reference to its source

The following summary has been in part extracted from expert judgement evaluations contained within the Voluntary Risk Assessment Report for Lead at: http://echa.europa.eu/chem_data/transit_measures/vrar_en.asp

Worker

1) Occasional conduct of the assay would be associated with intermittent transient increases of lead in blood likely less than 0.3 µg/dL. Given the low acute toxicity of lead, no health consequences would be associated with these exposures and a Risk Characterisation Ratio approaching "0" would be estimated.

2) Daily conduct of the fire assay, entailing daily handling of lead buttons, would be associated with chronic exposures that increase blood lead levels by 2.0 µg/dL or less. If a base line blood lead level of2.0 µg/dL were assumed, daily assay conduct would result in blood lead levels of 4.0 µg/dL . The Risk Characterisation ratios for women of reproductive age would be 0.4 and 0.2 for other adults.

Environment

Based upon the regional (diffuse) emissions inventory and the regional monitoring data contained within the CSR for this substance, no risk has been determined for any environmental compartment (see below) on a regional or continental scale. This data takes into account cumulative emissions from all identified uses of this substance. Given this generic conclusion no specific environmental emissions data on the uses covered by this ES are included

Compartment	Unit	PNEC	PEC Regional	RCR
Fresh water	µg/l	2.67	0.61	0.23
Marine water	µg/l	2.67	0.046	0.02
Fresh water sediment (without bioavailability correction)	mg/kg dw	174	100.1	0.58
Marine water sediment	mg/kg dw	174	53.2	0.31
Terrestrial	mg/kg dw	147	28.3	0.19

9. Guidance to Downstream Users to evaluate whether he works inside the boundaries set by the Exposure Scenario

The DU must comply with the hygiene measures set out in section 6.1 and Litharge safety data sheet section 8.