



<b>Grade name:</b>	Lead metal powder [particle diameter <1mm]
<b>Substance:</b>	Lead
<b>EC Number:</b>	231-100-4
<b>CAS Number:</b>	7439-92-1
<b>Substance Type:</b>	Mono-constituent substance
<b>Degree of purity:</b>	99.9 % (w/w)

**Composition:**

Constituent	Typical concentration	Concentration range	Remarks
lead EC no.: 231-100-4	99.9 % (w/w)	≥ 99.5 — ≤ 99.999 % (w/w)	
Impurity	Typical concentration	Concentration range	Remarks
Different metal impurities not affecting classification of substance		≥ 0.0 — ≤ 0.5 % (w/w)	Metal impurities in the range <0.5% (w/w): e.g. Sb, Fe, Cu; Metal impurities in the range <0.2% (w/w): e.g. Sn, Al, Zn, Cr, Se, Mg, Mn, Na, Ba, Sr, In, Ga, Te, Ag, Bi, Au, Ca, Pt; metal impurities in the range <0.1% (w/w): Ni, Ti, Hg; metal impurities in the range <0.025% (w/w): As, Cd; metal impurities in the range <0.01% (w/w): Co

**HARMONISED CLASSIFICATION IN ACCORDANCE WITH THE CLASSIFICATION LABELLING AND PACKAGING REGULATION EC (NO) 1272/2008**

Repr. 1A; H360FD: May damage fertility. May damage the unborn child.

Lact.: H362; May cause harm to breast-fed children.

Aquatic Chronic 1; H410: Very toxic to aquatic life with long lasting effects.

Aquatic Acute 1; H400: Very toxic to aquatic life.

**INDUSTRY SELF-CLASSIFICATION\***

Repr. 1A; H360FD: May damage fertility. May damage the unborn child.

Lact.; H362: May cause harm to breast-fed children.

STOT RE1; H372: Causes damage to organs through prolonged or repeated exposure.

Aquatic Chronic 1; H410: Very toxic to aquatic life with long lasting effects.

Aquatic Acute 1; H400: Very toxic to aquatic life.

**Specific Concentration Limits, M-Factors**

**SCL:**

Repr. 1A; H360D: C ≥ 0.03%

**M-Factor:**

Aquatic Acute 1: 10

**CLP LABELLING**

Signal word: Danger

Hazard pictograms:

GHS08: health hazard



GHS09: environment



Hazard statements:

**H360FD:** May damage fertility. May damage the unborn child.

**H362:** May cause harm to breast-fed children.

**H372:** Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure by inhalation or ingestion.

**H400:** Very toxic to aquatic life

**H410:** Very toxic to aquatic life with long lasting effects.

**Notes:****Industry self-classification explanation**

Lead metal massive (high purity grade) is included in Annex VI, Table 3.1 of Commission Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, under the entry “lead massive: [particle diameter ≥ 1 mm]” (Index No 082-014-00-7), agreed in the 9th ATP to CLP. As such this entry is legally binding and must be cited on both the label and SDS. The entry was updated to include Aquatic Chronic 1 by Commission Delegated Regulation (EU) 2024/197, published on 19 October 2024; this harmonised environmental classification is similarly legally binding across the European Union from 1 September 2025.

The toxicity of lead is generally considered to be mediated through the lead cation; it is manifested in effects on reproductive function but also on other body systems (blood, kidneys, reproductive function, development and the central nervous system). Metallic lead powder is amenable to systemic uptake via inhalation exposure, one the principle routes of lead exposure. Metallic lead powders are also easily ingested and, due to small particle size, are expected to undergo rapid dissolution in the gastrointestinal tract such that systemic uptake will be significantly enhanced. Classification of metallic lead powder is thus proposed in a fashion that mirrors that proposed for other inorganic lead compounds except for endpoints (e.g. cancer) where test data has indicated a lack of hazard.

Recital 4 of the 9<sup>th</sup> ATP indicates a distinction is necessary between the massive form (particle size of ≥1mm) and the powder form (particle size <1mm); a SCL of ≥0.03% for Repr. 1A was set for lead powder, whereas the GCL of ≥0.3% applies for lead metal massive. Classification as STOT-RE1 additionally applies due to the systemic availability of Pb ions and the effects on body systems, with a SCL of ≥0.5%.

The CLP Annex VI entry providing harmonised classification of lead metal powder [particle diameter < 1 mm] was amended by Commission Delegated Regulation (EU) 2024/197. The same hazard classes and categories apply as per the Annex VI entry from the entries' previous amendment (15th ATP); however the M-factors were updated by Regulation (EU) 2024/197 were updated and are legally binding across the European Union from 1 September 2025:

- Aquatic Acute 1; M-factor = 10
- Aquatic Chronic 1; M-factor = 100.

### Labelling derogation

A derogation from labelling requirements exists for metals in massive form. Such metals do not require a label according to Annex 1 to Regulation (EC) No 1272/2008 if they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market, although classified as hazardous in accordance with the criteria of that Annex.

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