



Lead REACH
CONSORTIUM

Grade name:	Speiss, lead (Grade 2)
Substance:	Speiss, lead
EC Number:	282-366-3
CAS Number:	84195-61-9
Substance Type:	UVCB
Degree of purity:	100 % (w/w)
Description of Product:	'Speiss, lead' is a solid at 20°C, 1013 hPa, initially formed as a molten metal arsenide, produced during smelting of lead-containing materials under reducing conditions and removed by tapping. 'Speiss, lead' is composed primarily of metal arsenides and metallic lead, and may contain antimonides. It may also contain copper and other elements in (inter)metallic and/or sulphidic forms.

Composition:

Constituents	Typical concentration	Concentration range	Remarks
Lead EC no.: 231-100-4	≤38.8% (w/w)	≥ 1 — ≤ 65 % (w/w)	Refers to % element. Pb is generally present in the form of lead metal and in the form of lead oxides (e.g. PbO, PbSb ₂ O ₆). Other Pb compounds such as lead sulphides may also be present.
Iron EC no.: 231-096-4	≤ 6.55 % (w/w)	> 0 — ≤ 60 % (w/w)	Refers to % element. Fe is generally present in the form of compounds such as iron oxides (e.g. Fe ₂ O ₃ , Fe ₃ O ₄) and/or sulphides (e.g. Na(Cu,Fe,Zn) ₂ S ₂) and/or silicates (e.g. FeSiO) and may also be present in the form of an alloy (e.g. FeAs).
Arsenic EC no.: 231-148-6	≤ 12.5 % (w/w)	> 0 — ≤ 20 % (w/w)	Refers to % element. As is generally present in the form of an alloy (e.g. FeAs, NiAsSnSb) and may also be present in the form of an arsenide (e.g. Cu ₅ As ₂ , NiAs).
Antimony EC no.: 231-146-5	≤ 17.3 % (w/w)	≥ 0 — ≤ 20 % (w/w)	Refers to % element. Sb is generally present in the form of an alloy (e.g. Cu(Sn,Sb), NiAsSnSb, Cu ₁₁ Sb ₃) and may also be present in the form of compounds such as oxides (e.g. PbSb ₂ O ₆) or sulphides (e.g. Sb ₂ S ₃).
Copper EC no.: 231-159-6	≤ 53.3 % (w/w)	≥ 5 — ≤ 60 % (w/w)	Refers to % element. Cu is generally present in the metallic form, in the form of an alloy (e.g. Cu ₃ Sn, Cu ₁₁ Sb ₃ , Cu(Sn,Sb)) and in the form of compounds such as the sulphides (e.g. Cu ₂ S, Na(Cu,Fe,Zn) ₂ S ₂). Sometimes Cu may also be present in the form of an arsenide (e.g. Cu ₅ As ₂).

Constituents	Typical concentration	Concentration range	Remarks
Sulphur EC no.: 231-722-6	≤ 11.2 % (w/w)	≥ 0 — ≤ 15 % (w/w)	Refers to % element. S is generally present in the form of sulphides (e.g. Cu ₂ S, Na(Cu,Fe,Zn) ₂ S ₂ , PbS, Sb ₂ S ₃).
Nickel EC no.: 231-111-4	≤ 12.4 % (w/w)	≥ 0 — ≤ 21 % (w/w)	Refers to % element. Ni is generally present in the form of an alloy (e.g. NiAsSnSb) and may also be present in the form of an arsenide (e.g. NiAs).
Tin EC no.: 231-141-8	≤ 11.2 % (w/w)	≥ 0 — ≤ 15 % (w/w)	Refers to % element. Sn is generally present in the form of an alloy (e.g. Cu ₃ Sn, Cu(Sn,Sb), NiAsSnSb).
Aluminium EC no.: 231-072-3	≤ 0.5 % (w/w)	≥ 0 — ≤ 12 % (w/w)	Refers to % element. Al is assumed to be present in the oxide form.
Silver EC no.: 231-131-3	≤ 3.64 % (w/w)	≥ 0 — ≤ 10 % (w/w)	Refers to % element. Ag is generally present in the metallic form.
Zinc EC no.: 231-175-3	≤ 1.5 % (w/w)	≥ 0 — ≤ 5 % (w/w)	Refers to % element. Zn is generally present in the form of Zn sulphide (e.g. Na(Cu,Fe,Zn) ₂ S ₂).
Sodium EC no.: 231-132-9	≤ 1.1% (w/w)	≥ 0 — ≤ 4 % (w/w)	Refers to % element. Na is assumed to be present in the oxide form.
Bismuth EC no.: 231-177-4	≤ 0.33 % (w/w)	≥ 0 — ≤ 3 % (w/w)	Refers to % element. Bi is assumed to be present in the metallic form.
Silicon EC no.: 231-130-8	≤ 0.78 % (w/w)	≥ 0 — ≤ 3 % (w/w)	Refers to % element. Si is generally present in the silicate form (e.g. FeSiO, CaSiO).
Magnesium EC no.: 231-104-6	≤ 0.1 % (w/w)	≥ 0 — ≤ 1.5 % (w/w)	Refers to % element. Mg is assumed to be present in the oxide form.
Cobalt EC no.: 231-158-0	≤ 0.56 % (w/w)	≥ 0 — ≤ 0.56 % (w/w)	Refers to % element. Co is assumed to be present in the metallic form.
Selenium EC no.: 231-957-4	≤ 0.16 % (w/w)	≥ 0 — ≤ 1 % (w/w)	Refers to % element. Se is generally present in the form of compounds such as oxides (e.g. PbSeO) or in the metallic form.
Tellurium EC no.: 236-813-4	≤ 0.23 % (w/w)	≥ 0 — ≤ 1 % (w/w)	Refers to % element. Te is assumed to be present in the metallic form.
Calcium EC no.: 231-179-5	≤ 0.3 % (w/w)	≥ 0 — ≤ 0.3 % (w/w)	Refers to % element. Ca is generally present in the silicate form (e.g. CaSiO).
Cadmium EC no.: 231-152-8	≤ 0.18 % (w/w)	≥ 0 — ≤ 0.2 % (w/w)	Refers to % element. Cd is assumed to be present in the metallic form.
Potassium EC no.: 231-119-8	≤ 0.05 % (w/w)	≥ 0 — ≤ 0.05 % (w/w)	Refers to % element. Ca is generally present in the silicate form (e.g. CaSiO).
Other minor constituents not affecting classification	≤ 0.1 % (w/w)	≥ 0 — ≤ 0.1 % (w/w)	

Classification:**Industry self-classification in accordance with the Classification Labelling and Packaging Regulation EC 1272/2008 (CLP):**

Acute Tox. 4; H302: Harmful if swallowed.

Acute Tox. 4; H332: Harmful if inhaled.

Skin Irrit. 2; H315: Causes skin irritation.

Skin Sens. 1; H317: May cause an allergic skin reaction.

Eye Dam. 1; H318: Causes serious eye damage.

Carc. 1A; H350: May cause cancer.

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

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

STOT Rep. Exp. 1; H372: Causes damage to organs through prolonged or repeated exposure.

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

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

Labelling:

Signal word: Danger

Hazard pictograms:

GHS05: corrosion



GHS07: exclamation mark



GHS08: health hazard



GHS09: environment

**Hazard statements:**

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360FD May damage fertility. May damage the unborn child.

H362 May cause harm to breast-fed children.

H372 Causes damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

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