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| Grade name: | Speiss, lead |
| 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, initially formed as a liquid phase in some lead smelting operations. Speiss, lead may contain copper, arsenic and other metals in the form alloys, sulphides and other compounds. |

Composition:

| Constituents | Typical concentration | Concentration range | Remarks |
|------------------------------|-----------------------|-----------------------|---|
| Lead EC no.: 231-100-4 | <= 38.8% (w/w) | >= 0 — <= 50 % (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. |
| 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). |
| 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). |
| 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. |
| 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). |
| Cobalt EC no.: 231-158-0 | <= 0.56 % (w/w) | >= 0 — <= 1% (w/w) | Refers to % element. Co is assumed to be present in the metallic form. |
| 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). |

| Constituents | Typical concentration | Concentration range | Remarks |
|--------------------------------|-----------------------|-----------------------|--|
| 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. |
| 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, Cu11Sb3) and may also be present in the form of compounds such as oxides (e.g. PbSb2O6) or sulphides (e.g. Sb2S3). |
| Arsenic EC no.: 231-148-6 | <= 12.5 % (w/w) | >= 0 — <= 40 % (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. Cu5As2, NiAs). |
| 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. |
| 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. Cu3Sn, Cu(Sn,Sb), NiAsSnSb). |
| 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. |
| 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. |
| 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). |
| 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. |
| 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. |
| 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). |
| 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. Cu2S, Na(Cu,Fe,Zn)2S2, PbS, Sb2S3). |

Classification:

Dangerous Substances Directive 67/548/EEC - Not classified as hazardous.

Classification Labelling and Packaging Regulation EC 1272/2008 - Not classified as hazardous.

Industry classification proposals - Industry proposes to classify speiss, lead to bring it into line with the latest scientific data and knowledge. The proposed classification will be:

DSD

Xn; R20/22: Harmful; Harmful by inhalation or if swallowed.

T; R48/23: Toxic: danger of serious damage to health by prolonged exposure through inhalation.

R43: May cause sensitisation by skin contact.

Carc. Cat. 2; R45: May cause cancer.

Repr. Cat. 1; R60: May impair fertility.

Repr. Cat. 1; R61: May cause harm to the unborn child.

N; R50/53: Dangerous for the environment; Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CLP

Acute Tox. 4; H302: Harmful if swallowed.

Acute Tox. 4; H332: Harmful if inhaled.

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

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

Carc. 1B; H350: May cause cancer.

STOT Rep. Exp. 1; 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.

Labelling:

Signal word: Danger

Hazard pictograms:

GHS07: exclamation mark



GHS08: health hazard



GHS09: environment

**Hazard statements:**

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H360FD May damage fertility. May damage the unborn child.

H350 May cause cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

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