



Lead REACH
CONSORTIUM

Grade name:	Matte, lead (General Grade)
Substance:	Matte, lead
EC Number:	282-356-9
CAS Number:	84195-51-7
Substance Type:	UVCB
Degree of purity:	100 % (w/w)
Description of Product:	Matte, lead is a solid, initially formed as a molten metal sulphide phase during the smelting of primary and secondary lead containing materials high in sulphur.

Composition:

Constituents	Typical concentration	Concentration range	Remarks
Lead EC no.: 231-100-4	<= 73.48 % (w/w)	>= 0 — <= 82 % (w/w)	Refers to % element. Pb is generally present in the metallic form and in the oxide form (e.g. PbO). Other Pb compounds such as sulphides (e.g. PbS) and/or silicates (e.g. PbSiO) may also be present.
Copper EC no.: 231-159-6	<= 40.01 % (w/w)	>= 0 — <= 62 % (w/w)	Refers to % element. Cu is generally present in the form of an alloy (e.g. Cu ₃ (Sn,Sb,Ni), SnCuNiFe, SbSnNiCuFe) or in the form of compounds such as sulphides (e.g. Cu ₂ S, CuPbS).
Sulphur EC no.: 231-722-6	<= 21 % (w/w)	>= 0 — <= 30 % (w/w)	Refers to % element. S is generally present in the form of sulphides (e.g. PbS, Cu ₂ S, FeS) and/or sulphates (e.g. FeSO ₄).
Zinc EC no.: 231-175-3	<= 6 % (w/w)	>= 0 — <= 20 % (w/w)	Refers to % element. Zn is generally present in the oxide form (e.g. FeZnO).
Iron EC no.: 231-096-4	<= 61.2 % (w/w)	>= 0 — <= 80 % (w/w)	Refers to % element. Fe is generally present in the metallic form and/or in the form of an alloy (e.g. SnCuNiFe) and/or in the form of compounds such as sulphides (e.g. FeS), oxides (e.g. FeO, MgFeCrO, FeZnO), silicates (e.g. Fe ₂ SiO ₄), sulphates (e.g. FeSO ₄) and/or hydroxides (e.g. FeOOH).
Nickel EC no.: 231-111-4	<= 1.6 % (w/w)	>= 0 — <= 14 % (w/w)	Refers to % element. Ni is generally present in the form of an alloy (e.g. SbSnNiCuFe, SnCuNiFe, Cu ₃ (Sn,Sb,Ni), SbNi) and may also be present in the

Constituents	Typical concentration	Concentration range	Remarks
			form of compounds such as oxides (e.g. PbNiO).
Silver EC no.: 231-131-3	<= 0.66 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. Ag is assumed to be present in the oxide form.
Gold EC no.: 231-165-9	<= 5 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. Au is assumed to be present in the oxide form.
Antimony EC no.: 231-146-5	<= 1.21 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. Sb is generally present in the form of an alloy (e.g. Cu ₃ (Sn,Sb,Ni), SbNi).
Arsenic EC no.: 231-148-6	<= 2.25 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. As is assumed to be present in the oxide form.
Cadmium EC no.: 231-152-8	<= 0.75 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. Cd is assumed to be present in the sulphide form.
Selenium EC no.: 231-957-4	<= 0.83 % (w/w)	>= 0 — <= 2 % (w/w)	Refers to % element. Se is assumed to be present in the oxide form.
Bismuth EC no.: 231-177-4	<= 0.05 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. Bi is assumed to be present in the oxide form.
Molybdenum EC no.: 231-107-2	<= 0.03 % (w/w)	>= 0 — <= 0.1 % (w/w)	Refers to % element. Mo is assumed to be present in the oxide form.
Tin EC no.: 231-141-8	<= 3.59 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. Sn is generally present in the form of an alloy (e.g. Cu ₃ (Sn,Sb,Ni), SnCuNiFe, Cu ₃ Sn, SbSnNiCuFe).
Tellurium EC no.: 236-813-4	<= 0.43 % (w/w)	>= 0 — <= 1 % (w/w)	Refers to % element. Te is assumed to be present in the oxide form.
Aluminium EC no.: 231-072-3	<= 2 % (w/w)	>= 0 — <= 5 % (w/w)	Refers to % element. Al is generally present in the form of compounds such as silicates.
Manganese EC no.: 231-105-1	<= 1 % (w/w)	>= 0 — <= 5 % (w/w)	Refers to % element. Mn is assumed to be present in the oxide form.
Silicon EC no.: 231-130-8	<= 5 % (w/w)	>= 0 — <= 20 % (w/w)	Refers to % element. Si is generally present in the form of silicates (e.g. PbSiO).
Sodium EC no.: 231-132-9	<= 1.44 % (w/w)	>= 0 — <= 5 % (w/w)	Refers to % element. Na is generally present in the form of compounds such as silicates.
Magnesium EC no.: 231-104-6	<= 1 % (w/w)	>= 0 — <= 5 % (w/w)	Refers to % element. Mg is generally present in the form of oxides (e.g. MgFeCrO).
Calcium EC no.: 231-179-5	<= 5 % (w/w)	>= 0 — <= 11 % (w/w)	Refers to % element. Ca is generally present in the form of compounds such as silicates.
Cobalt EC no.: 231-158-0	<= 0.1 % (w/w)	>= 0 — <= 0.5 % (w/w)	Refers to % element. Co is assumed to be present in the

Constituents	Typical concentration	Concentration range	Remarks
			sulphate form.
Potassium EC no.: 231-119-8	<= 0.15 % (w/w)	>= 0 — <= 5 % (w/w)	Refers to % element. K is generally present in the form of compounds such as silicates.
Chromium EC no.: 231-157-5	<= 0.07 % (w/w)	>= 0 — <= 2 % (w/w)	Refers to % element. Cr is generally present in the form of oxides (e.g. MgFeCrO).

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 matte, lead (general grade) to bring it into line with the latest scientific data and knowledge. The proposed classification will be:

DSD

T; R25: Toxic if swallowed.

T; R48/23/25: Toxic: danger of serious damage to health by prolonged exposure through inhalation, and if swallowed.

R43: May cause sensitisation by skin contact.

Xi; R38: Irritating to skin.

Xi; R41: Risk of serious damage to eyes.

Carc. Cat. 1; 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. 3; H301: Toxic if swallowed.

Skin Irrit. 2; H315: Causes irritation skin.

Eye Damage 1; H318: Causes serious eye damage.

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

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

Carc. 1A; 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:

GHS05: Corrosion



GHS06: skull and crossbones



GHS08: health hazard



GHS09: environment



Hazard statements:

H301 Toxic if swallowed.

H315 Causes irritation skin.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H360FD May damage fertility. May damage the unborn child.

H350 May cause cancer.

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

H410 Very toxic to aquatic life with long lasting effects.

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