



<b>Grade name:</b>	Wastes, lead battery reprocessing (General grade)
<b>Substance:</b>	Wastes, lead battery reprocessing
<b>EC Number:</b>	305-445-7
<b>CAS Number:</b>	94551-99-2
<b>Substance Type:</b>	UVCB
<b>Degree of purity:</b>	100 % (w/w)
<b>Description of Product:</b>	Wastes, lead battery reprocessing is made by recovering the lead compounds from exhausted lead-acid batteries and converting it into a prepared solid feed suitable for lead smelting. Lead is mainly present as oxides, sulphates and in metallic form.

**Composition:**

Constituents	Typical concentration	Concentration range	Remarks
Lead EC no.: 231-100-4	<= 79.5 % (w/w)	>= 0 — <= 80% (w/w)	Refers to % element. In general Pb is mainly present in form of oxides (e.g. Pb <sub>2</sub> O <sub>6</sub> , PbO, PbCaO <sub>6</sub> ). Pb may also be present in the sulphate form (e.g. PbSO <sub>4</sub> ) and/or metallic form.
Copper EC no.: 231-159-6	<= 2.2% (w/w)	>= 0 — <= 12 % (w/w)	Refers to % element. Cu is assumed to be present in the sulphate form.
Sulfur EC no.: 231-722-6	<= 9.5% (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. S is generally present in the sulphate form (e.g. PbSO <sub>4</sub> ).
Zinc EC no.: 231-175-3	<= 0.4 % (w/w)	>= 0 — <= 2 % (w/w)	Refers to % element. Zn is assumed to be present in the sulphate form.
Cadmium EC no.: 231-152-8	<= 0.05 % (w/w)	>= 0 — <= 1.6 % (w/w)	Refers to % element. Cd is assumed to be present in the sulphate form.
Iron EC no.: 231-096-4	<= 3.9 % (w/w)	>= 0 — <= 30 % (w/w)	Refers to % element. Fe is assumed to be present in the oxide form.
Nickel EC no.: 231-111-4	<= 0.1 % (w/w)	>= 0 — <= 2 % (w/w)	Refers to % element. Ni is assumed to be present in the sulphate form.
Silver EC no.: 231-131-3	<= 3.1 % (w/w)	>= 0 — <= 11 % (w/w)	Refers to % element. Ag is assumed to be present in the oxide form.
Antimony EC no.: 231-146-5	<= 4 % (w/w)	>= 0 — <= 11 % (w/w)	Refers to % element. Sb is assumed to be present in the oxide form.
Arsenic EC no.: 231-148-6	<= 0.5 % (w/w)	>= 0 — <= 8 % (w/w)	Refers to % element. As is assumed to be present in the

Constituents	Typical concentration	Concentration range	Remarks
			oxide form.
Bismuth EC no.: 231-177-4	<= 6.4 % (w/w)	>= 0 — <= 25 % (w/w)	Refers to % element. Bi is assumed to be present in the oxide form.
Tin EC no.: 231-141-8	<= 1.4 % (w/w)	>= 0 — <= 15 % (w/w)	Refers to % element. Sn is assumed to be present in the oxide form.
Selenium EC no.: 231-957-4	<= 1.1 % (w/w)	>= 0 — <= 4 % (w/w)	Refers to % element. Se is assumed to be present in the oxide form.
Tellurium EC no.: 236-813-4	<= 12.8 % (w/w)	>= 0 — <= 40 % (w/w)	Refers to % element. Te is assumed to be present in the oxide form.
Aluminium EC no.: 231-072-3	<= 0.6 % (w/w)	>= 0 — <= 5 % (w/w)	Refers to % element. Al is assumed to be present in the oxide form.
Manganese EC no.: 231-105-1	<= 0.14 % (w/w)	>= 0 — <= 1.5 % (w/w)	Refers to % element. Mn is assumed to be present in the oxide form.
Silicon EC no.: 231-130-8	<= 2 % (w/w)	>= 0 — <= 28 % (w/w)	Refers to % element. Si is assumed to be present in the silicate form.
Carbon EC no.: 231-153-3	<= 0.5 % (w/w)	>= 0 — <= 1 % (w/w)	Refers to % element. C is assumed to be present in the form of hydrocarbons.
Sodium EC no.: 231-132-9	<= 1.5 % (w/w)	>= 0 — <= 10 % (w/w)	Refers to % element. Na is assumed to be present in the oxide form.
Magnesium EC no.: 231-104-6	<= 0.7 % (w/w)	>= 0 — <= 2 % (w/w)	Refers to % element. Mg is assumed to be present in the oxide form.
Calcium EC no.: 231-179-5	<= 0.9 % (w/w)	>= 0 — <= 6 % (w/w)	Refers to % element. Ca is generally present in the oxide form (e.g. PbCaO6).

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

**DSD**

Xn; R20: Harmful by inhalation.

T; R25: Toxic if swallowed

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

Xi; R38: Irritating to skin.

Xi; R41: Risk of serious damage to eyes.

R43: May cause sensitisation by skin contact.

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.

Acute Tox. 4; H332: Harmful if inhaled.

Skin Irrit. 2; H315: Causes skin irritation.

Eye Irrit. 2; H319: Causes serious eye irritation.

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.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317	May cause an allergic skin reaction.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
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.

### **Disclaimer**

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