

SAFETY DATA SHEET according to 91/155/EEC

Print date: 03.07.07

reviewed on: 02.07.07

1. IDENTIFICATION OF MATERIAL/COMPOSITION AND COMPANY NAME

• **Product information**

• **Trade name:** Balance weights and battery terminals
Products made of an lead-antimony alloy

• **Manufacturer/supplier:**
DIONYS HOFMANN GmbH
Hahnstrasse 53
72461 Albstadt
Germany

Tel.: +49 (0) 7432 201-0
Fax: +49 (0) 7432 201-190

• **Information department:** Operational safety
• **Emergency information desk:** +49 (0) 7432 201-173

2. COMPOSITION OF/DETAILS ON COMPONENT PARTS

• **Chemical characterisation:** Hard lead

• **Hazardous substances**

Substance	CAS no.	Conc.	Symbol	Recommendation guidelines
Lead	7439-92-1	89,7 – 99 %	T, N	20/22-33-61-62-50/53
Antimony	7440-36-0	1 – 10 %	Xn, N	20/22 – 51/53
Arsenic	7440-38-2	0 – 3 %	T, N	23/25 – 50/53

3. POTENTIAL HAZARDS

• **Hazard identification:** Not applicable

• **Special information concerning hazards to human beings and environment:** Not applicable

• **Classification system:**

The classification complies with the current EC lists, but amplified by information from technical literature and company data.

• **Additional information:**

According to TRGS 220 (technical specifications for hazardous substances), clause 1 (2), bullet point 2, balance weights and battery terminals belong to those products, which are not classified as hazardous, but if otherwise applied (e. g. melting) hazardous substances may be produced or released. Metallic lead in bio-available form is to be classified as reprotoxic Cat. 1 with R 61 and Cat. 2 with R 62. Lead and its inorganic compounds can be absorbed by inhalation and/or swallowing and they belong to those substances (R 20/22 and R 33) having a harmful and cumulative effect on the human health. Target organs are mainly red blood corpuscles, bone marrow and cell functions. Lead is deposited in bones. Organic compounds are more harmful, because partly they can also be absorbed through the skin. Lethal poisoning is possible. Practically all lead compounds are classified as R 61 (may harm the baby in the womb) in Cat. 1 and as R 62 (may affect the reproductivity) in Cat. 3 of the reprotoxic substances.

Ingested lead can have a lethal effect on the higher fauna.

(continued on page 2)

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Trade name:	Balance weights and battery terminals Products made of an lead-antimony alloy
-------------	--

(continued from page 1)

4. FIRST-AID MEASURES

• **General information:**

Actions are only necessary, if dusts or fumes are inhaled or swallowed when handling this material.

- **after inhalation:** Fresh air or oxygen inlet; call for medical attendance.
- **after skin contact:** Wash immediately with water and soap and rinse thoroughly. In general the product is not skin irritating.
- **after eye contact:** Rinse eyes with eye cleft opened under running water.
- **after swallowing:** Rinse mouth and drink plenty of water. Consult the doctor immediately.

5. FIREFIGHTING MEASURES

• **Appropriate extinguishing substances:**

Adapt the fire extinguishing methods to the ambience. In case of liquid lead: dry sand.

• **Particular hazards by the substance, its products of combustion or emitting gases:**

Lead oxide fume and lead vapour are toxic.

• **Particular protective equipment:**

Put the breathing apparatus on.

In case of liquid lead: Safety helmet with visor, flame retardant protective clothing, protective shoes with gaiters, protective gloves.

6. MEASURES IN CASE OF UNINTENDED RELEASE

- **Personal precautionary measures:** Provide for sufficient ventilation.
- **Environmental protection measures:** Suppress gases/vapours/mists with water spray jet.
- **Cleaning/absorption procedure:** Absorb mechanically.

(continued on page 3)

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Trade name:	Balance weights and battery terminals Products made of an lead-antimony alloy
-------------	--

(continued from page 2)

7. HANDLING AND STORAGE

- **Handling:**
- **Information on safe handling:**
Do not eat, drink, smoke or snuff at work. Wash hands thoroughly before breaks and work finish.

In case of emitting vapours, fumes and smokes: Exhausters at the spot of origin and emission, good ambient ventilation or breathing protection are imperative (see TRGS 505). Operating instructions and training of employees according to § 14 GefStoffV (hazardous materials regulation) as per TRGS 555.
- **Information on fire and explosion protection:** No particular measures required.
- **Storage:**
- **Requirements on storage rooms and containers:**
No particular requirements. Keep dry.
- **Information on storage consolidation:**
Do not store together with acids.
- **Storage class:** 13

8. EXPOSURE RESTRICTION AND PERSONAL PROTECTIVE EQUIPMENT

- **Additional information on the design of the technical facilities:**
Please observe the order of the protective measures (§ 9 GefStoffV):
TRGS 505, TRGS 402, TRGS 403

- **Components with workplace-relevant thresholds to be supervised:**

CAS no.	Substance	MAK value	Unit
7439-92-1	Lead	0,1 E	mg/m ³
7440-36-0	Antimony	0,5 E	mg/m ³
1309-64-4	Antimony(III) oxide	0,1 E	mg/m ³
1309-60-0	Lead(IV) oxide	0,1 E	mg/m ³
1317-36-8	Lead(II) oxide	0,1 E	mg/m ³
		BAT value	Unit
	Lead in blood of men	400	µg/l blood
	Lead in blood of women younger than 40	300	µg/l blood
	Amino lavulinic acid (men)	15	µg/l urine
	Amino lavulinic acid (women)	6	µg/l urine

- **Additional information:**
The above data is based on the lists valid at the date of issue of this document.

(continued on page 4)

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Trade name:	Balance weights and battery terminals Products made of an lead-antimony alloy
-------------	--

(continued from page 3)

- **Personal protective equipment:**
- **General protective and hygiene measures:**
Keep away from food, drinks and fodder.
Take off dirty clothes.
Wash hands thoroughly before breaks and work finish.
- **Breathing protection:** Breathing protection in case of high concentrations of dusts, mists, vapours.
- **Hand protection:** Protective gloves ZH 1/706
- **Eye protection:** Tightly closing safety goggles in case of dusts, mists, vapours.
- **Body protection:** Protective working clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

• General information	
Form:	solid
Colour:	grey
Odour:	none
• Change of state	
Melting point/melting range:	255 – 327 °C
Boiling point/boiling range:	1130 – 1750 °C
• Flash point:	not applicable
• Explosion limits:	
lower:	not applicable
upper:	not applicable
• Vapour pressure at 1000 °C:	1,33 hPa
• Density at 20 °C:	10,37 – 11,34 g/cm ³
• Solubility in / miscibility with water:	insoluble
• pH value:	undetermined
• Viscosity:	
dynamic:	not applicable

10. STABILITY AND REACTIVITY

- **Thermic decomposition / conditions to be avoided:**
No thermic decomposition if applied according to regulations.
The material is solid below the melting point.
Unintended heating up to red heat by exposure to air: Formation of lead oxide/lead vapour.
- **Hazardous reactions:** Reaction with strong acids.
- **Hazardous decomposition products:** Hazardous decomposition products unknown.

(continued on page 5)

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-------------	--

(continued from page 4)

11. INFORMATION ON TOXICOLOGY

- **Acute toxicity:**
No data for the metal in delivery condition.
- **Further toxicological information :**
Symptoms of a lead illness may be: Faintness, absence of appetite, vertigo, headache, constipations and other intestinal disorders, pale-grey to yellowish complexion, lead colics, paralytic symptoms in the finger and hand musculature.
Increased excretion of particular proteins and δ-amino lavulinic acid already at the beginning of more frequent exposure to lead and lead absorption.
- **Additional toxicological information:** No noxious effects if handled appropriately.

12. INFORMATION ON ECOLOGY

- **Behaviour in environmental compartments:**
- **Mobility and bioaccumulation potential:**
Due to the propensity to create hardly soluble compounds the mobility of lead ions is relatively small.
- **Ecotoxic effects:**
- **Remark:** Valid are the waste water threshold values prescribed by law.
- **General information:**
Do not drain into ground water, waters or sewage water system.

13. INFORMATION ON DISPOSAL

- **Product:** Products for recycling
Recommendation: Contact manufacturer for recycling information
- **Packaging:**
Recommendation:
Waste identification: Packaging made of paper or cardboard (15 01 01)
Packaging made of plastic (15 01 02)

(continued on page 6)

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Trade name:	Balance weights and battery terminals Products made of an lead-antimony alloy
-------------	--

(continued from page 5)

14. INFORMATION ON TRANSPORT

<ul style="list-style-type: none"> • Land transport ADR/RID and GGVS/GGVE (cross-border/inland): • ADR/RID-GGVS/E class: -----
<ul style="list-style-type: none"> • Sea transport IMDG/GGVSee: • IMDG/GGVSee class: • Marine pollutant: no
<ul style="list-style-type: none"> • Air transport ICAO-TI and IATA-DGR: • ICAO/IATA class:
<ul style="list-style-type: none"> • Transport/additional information: no hazardous material as per above regulations

15. REGULATIONS

<ul style="list-style-type: none"> • Identification according to EEC directives: Substance identification is not compulsory according to the EU lists or other literature sources we know. • National directives: • Information on employment restriction: Restriction according to § 22 Youth Protection Law and Maternity Protection Law as well as BAT threshold values according to TRGS 505/Occupational Medicine Principle G2. • Technical instruction on air: Class III • Water hazard class: The classification for metallic lead does not apply. • Additional regulations, restrictions and prohibition laws: Attention must be paid to the Chemical Prohibition Law and the Manufacturing and Application Prohibition according to Annex VI, no. 6 of the GefStoffV as well as § 18 section 2 (homework) and § 7 (investigation obligation) and also the Fodder Law.
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(continued on page 7)

SAFETY DATA SHEET according to 91/155/EEC

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Trade name:	Balance weights and battery terminals Products made of an lead-antimony alloy
-------------	--

(continued from page 6)

16. ADDITIONAL INFORMATION

• **Relevant recommendation guidelines**

- R 20/22 Noxious if inhaled or swallowed
- R 33 Hazard of cumulative effects
- R 50/53 Very toxic to water organisms, may have harmful long-term effects on waters
- R 61 May harm the baby in the womb
- R 62 May affect the reproductivity

This safety data sheet reflects our current level of information on environmental relevance and operational safety and health regulations with regard to our product in delivery condition. It describes the safety requirements for handling our unmodified products.

All details beyond this specification are references only, because the methods and conditions for the storage, application and disposal after delivery of our product are outside our responsibility.

Therefore we assume no responsibility for any damages and/or costs connected with the storage and application of our products as well as the disposal.

• **Department responsible for issuing safety data sheets:**

DIONYS HOFMANN GmbH
 Dept. Operational Safety
 Hahnstrasse 53
 72461 Albstadt
 Contact: Mr. Sieber