

ZINC ALLOY BALANCE WEIGHTS

1. Identification of product and company details

Commercial name: Zinc alloy balance weights used in automotive vehicle industries.

Further details: (a) Balance weight of Zinc alloy (without surface protection) with steel spring clip (corrosion protected).
(b) Balance weight of Zinc alloy (with surface protection) with steel spring clip (corrosion protected)

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2. Composition:

High purity Zinc with additions of Aluminium, Copper, Magnesium and trace elements. The maximum levels of these additions for each material are:-

Aluminium	4.3%
Copper	0.08%
Magnesium	0.06%

The maximum other element levels specified within the alloy (percentage by weight) are:-

Iron 0.10 Lead 0.08 Cadmium 0.002 Tin 0.002 Nickel 0.01 Silicon 0.01

These metals are not known to constitute a risk to health or safety at the levels stated. Other impurities may be present in the alloys but at levels less than stated above.

Note: A level of 0.10 weight % lead (Pb) maximum is acceptable for vehicle components in accordance with EU End of Life Vehicle Directive 2000/53/EC and amendment 2002/525/EC.

3. Hazardous information

Classification: Not classified as hazardous.

Inhalation: Heating Zinc to temperatures near or above its boiling point will produce Zinc Oxide fumes. It is therefore advisable to avoid conditions and practices, which generate fumes. Inhalation of Zinc fumes may produce metal fume fever, a benign, reversible, flu like condition. The symptoms of metal fume fever will occur within 3 to 10 hours of exposure. These will include immediate dryness and irritation of the throat, tightness of the chest, and coughing. These may later be followed by flu like symptoms which include fever, malaise, perspiration, frontal headache, muscle cramps, low back pain and occasionally blurred vision, nausea and vomiting. Rest assists recovery and a symptomatic treatment such as aspirin is recommended.

Ingestion: Zinc is not usually regarded as a normal occupational hazard. When ingested in excessive quantities Zinc can irritate the stomach resulting in nausea and vomiting.

Skin Contact: Accidental burn by molten alloy or molten metal may cause severe burn damage to skin tissue. Contact with dust or fume may cause local skin irritation but would not cause tissue damage.

Eyes: Molten metal may cause severe burn damage and may result in loss of vision. Contact with dust or fume may cause local skin irritation but would not cause tissue damage.

Chemical Name	CAS No.	Carcinogen	Occupational Exposure limit	
			Long Term EXP Limit (8Hour TWA)	Short Term EXP Limit (15 minute TWA)
Zinc Oxide and fume (ZnO)	1314 – 13 – 2	No	5 mgm ⁻³	10 mgm ⁻³
Zinc	Not Listed	No	Not listed	Not listed
Aluminium metal	7429 – 90 – 5	No	Not listed	Not Listed

4. First Aid measures:

Inhalation

Remove victim from exposure to processing fumes or dusts to fresh air. Seek medical attention immediately.

Ingestion

Not regarded as a normal occupational hazard. Do not induce vomiting – Seek medical attention immediately if large quantities of dust or fume are ingested.

Skin Contact

If dust, remove contaminated clothing and wash effected area with soap and water. Seek medical attention if irritation persists.

Molten Metal – flood contact area to solidify and cool but do not attempt to remove encrusted metal on skin or clothing. Continue to flush for at least 10 minutes. Cover burns, if bigger than a 50 pence piece. Seek further medical attention immediately.

Eyes

If dust enters eyes flush for 10 – 20 minutes with cold water. Seek medical attention if required.

5. Fire Fighting:

Zinc balance weights are not flammable. If present in a fire then use suitable extinguishing media for surrounding combustibles.

If present in molten form use dry sand, **DO NOT USE WATER** as this may present an explosion hazard.

Finely divided metallic dust form flammable or explosive dust clouds when mixed with air. Bulk dust in a damp state may heat spontaneously and ignite on exposure to air.

6. Unusual fire and explosion hazards:

Do not allow water to come into contact with molten metal as this super heats the water and evolves hydrogen gas. This reaction will cause the molten metal to explode.

Contact with acids and alkali hydroxides results in the evolution of hydrogen gas which is potentially explosive. Mixtures with potassium chlorate or ammonium nitrate may explode on impact.

7. Accidental Release:

The material is recyclable. In solid state pick up and reuse if not contaminated. If contaminated, material should be carried out in accordance with current regulations.

8. Handling and Storage:

Handling zinc weights either in loose form or in boxes or cartons should be done with common sense and good practice.

Do not stack pallets of zinc weights as they may become unstable. Store only on the floor or on pallet racking with a solid base to support the whole of the pallet.

Pallets should be lifted by overhead crane or forklift truck.

Zinc alloy is a hard metal and care should be taken when handling weights for fitment to ensure no cuts or abrasions.

Under no circumstances should Zinc be stored with strong acids or alkalis as Zinc can react vigorously with either to produce hydrogen gas which, in poorly ventilated conditions could produce a combustible or explosive mixture with air.

9. Physical Data (Zinc):

Appearance:	Zinc is a silver grey metal
Physical state:	Solid
Density:	6.7g/cc
Melting point:	381-387degC
Boiling point:	907degC
Solubility in water:	Insoluble
Odour:	None

10. Reactivity Data

Zinc is stable under normal conditions but can react vigorously with acids and alkali's. Zinc is stable at room temperature. Hazardous fumes do not occur when Zinc is heated within normal melting ranges.

Incompatibilities : Contact with acids and alkalis will generate highly flammable hydrogen gas. Acidic arsenic or antimony compounds in contact with Zinc metal may evolve highly toxic arsine or stibine gas. Incompatible with strong oxidising agents such as chlorine, fluorine, bromine, sodium potassium or barium peroxide, sodium or potassium chlorate, chromium trioxide and fused ammonium nitrate. Also incompatible with elemental sulphur dust, halogenated hydrocarbons or chlorinated solvents and chlorinated rubber.

Hazardous Decomposition Products: Thermal oxidation of this metal or dust will generate Zinc oxide fume which on inhalation in sufficient quantity can produce metal fume fever, a transient influenza like illness.

11. Ecological Information:

Zinc in the metallic form has limited bioavailability and poses no immediate ecological risk. However, processes in the environment may alter its bioavailability. In aquatic systems Zinc bioaccumulates in both plants and animals. In terrestrial systems the mobility of Zinc in soil is dependent on soil conditions. Zinc also bioaccumulates in terrestrial plants vertebrates and mammals with plant uptake from soil dependent on the plant species, soil pH and soil composition.

12. Disposal Considerations:

Wherever possible unwanted metal should be recycled for recovery. Otherwise disposal should be in accordance with national legislation.

13. Transportation Information:

Zinc ingot is not classified as hazardous for transport.

All information given in this material data safety sheet is given without warranty or representation either express or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. It is intended solely for your own investigation and verification.

It is not possible to identify all hazards associated with the use of this product and we disclaim any liability for damages arising out of or related to the information provided.