Material Safety Data Sheet
Atomised Aluminium Powder

Edition: 01/05/2018

1) Identification of substance/preparation and of the company undertaking

Material	Atomised Aluminium Powder
EC No	231-072-6
CAS No	7429-90-5
REACH Registration No	01-2119529243-45-XXXX
Company	Inoxia Ltd 45.7 Dunsfold Park Stovolds Hill Cranleigh Surrey GU6 8TB Tel: 02032 909990 safety@inoxia.co.uk www.inoxia.co.uk

1.2. Relevant identified uses of the substance or mixture and uses advised against
Powder Metallurgy, Decorative Castings/Coatings, Industrial Coatings.

2) Hazards identification.

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Not classified as dangerous

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Pictogram: None
Signal word: None
Hazard statement(s): None
Precautionary statement(s): None

Classification was done according Annex VI of directive (EU) No. 1272/2008. Nota T was used. Tests and classification were done according Part III, sub-section 33.2.1 and 33.3.1.6, of the UN recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria.

2.3. Other hazards
If suspended in air, dust clouds can be ignited in the presence of an ignition source. Explosion risk!

Prolonged contact of Aluminium powder with water may result in a reaction releasing hydrogen. Ignition risk.

Aluminium powder will react with oxidising agents, acids and alkalis, causing heating and hydrogen release. Explosion risk.

Aluminium powder may react violently with halogens and halogenated hydrocarbons.

The substances in the mixture do not meet the criteria for PBT or vPvB substances

3) Composition/information on ingredient

3.1. Description of material: Aluminium Powder
Synonyms: None

Chemical Composition:
EINECS N°: 231-072-3
CAS N°: 7429-90-5
INDEX N°: 013-002-00-1
Chemical name: Aluminium
Conc. (% w/w): >99
Hazard class and category code: -
Hazard statement: -
Danger symbol/R phrases: -

4) First Aid Measures

4.1. Description of first aid measures
General Advice: First aid followed by medical attention.

Inhalation: Move exposed person to fresh air. Keep warm and at rest. Seek medical attention as soon as possible.

Skin contact: Wash with mild soap and water. Generally the product does not irritate the skin. Seek medical advice if irritation occurs/persists.

Eye contact: Rinse opened eye for several minutes under running water. Seek medical attention if irritation persists.

Ingestion: Wash mouth out with water, seek medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed
No further relevant information available

4.3. Indication of any immediate medical attention and special treatment needed
No further relevant information available

5) Fire Fighting

5.1. Suitable extinguishing media

Dry sand, dry powder extinguisher, fire blanket

Extinguishing Media not suitable for safety reasons

Water, Carbon dioxide, foam, ABC Powder

5.2. Special hazards arising from the substance or mixture

Contact with water liberates extremely flammable gas (hydrogen)

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6) Accidental Release

6.1. Personal precautions

Wear protective equipment.
Keep unprotected persons away.
Avoid formation of dust

6.2. Environmental precautions

Do not allow product to reach ground water, water bodies or sewerage system.

6.3. Methods and material for containment and cleaning up

Pick up manually
DO NOT USE a vacuum

6.4. Reference to other sections

See also section 8 and 13

7) Handling/Storage

7.1. Precautions for safe handling

Close containers carefully after use
Maintain good housekeeping to avoid causing dust and deposit of dust.
Keep away from sources of ignition. No smoking
Use intrinsically safe equipment and non-sparking tools. Protect against electrostatic charges (e.g use full metal shovels)
Whilst refilling connect containers with earthing clamps.

7.2. Conditions for safe storage, including any incompatibilities

Store in cool dry place in non-combustible containers (original containers preferred). Do not store with oxidising agents, other combustible materials, acids or alkalis. Store away from steam pipes, radiators or other sources of heat or moisture

7.3. Specific end use(s)

None

8) Exposure Controls/Personal Protection

8.1. Control parameters

OES: *Average daily value:* 10mg/m3 total dust
(8hr TWA) 4mg/ m3 respirable fraction

(Ref: EH40/2005 as consolidated with amendments Oct 2007.)

National exposure control limits must be considered where appropriate.

8.2. Exposure controls

Respiratory protection: Cartridge filter type P 1 according to EN 149:2001 is recommended if exposure control limit is exceeded.

Hand Protection: Gloves according to EN 388 and 407 are recommended.

Eye Protection: Tight safety goggles.

Body Protection: Non-conductive and fireproof clothing (e.g Nomex III antistatic) according to EN 531 and 1149-1.

Foot Protection: Non-conductive boot according to EN345.

General Safety and Hygiene measures: In general, no pure synthetic fibres (electrostatic: charge). Wash hands before breaks and at the end of work.

9) Physical/Chemical Properties

Appearance	Silver grey coloured powder
Odour	Odourless
Odour threshold	No data available
pH	No data available
Melting/freezing point	660ºC
Initial boiling point and boiling range	2467ºC
Flash point	>600ºC
Evaporation rate	no data available
Flammability (solid, gas)	Product is not flammable
Upper/lower flammability or explosive limits	Product is not hazardous with regard to explosions, however it may form an explosive dust/air mixture.
Vapour pressure	No data available
Vapour density	No data available
Relative density	2.7 g/cm^3 at 20°C
Specific weight	No data available
Water solubility	Insoluble
Partition coefficient: n octanol/water	No data available
Autoignition temperature	No autoignition
Decomposition temperature	No data available

Viscosity	No data available
Explosive properties	Lower limit 30g/m^3, upper Limit not determined
Oxidizing properties	No data available

9.1. Other safety information

No data available

10) Stability/Reactivity

10.1. Reactivity

No decomposition in usual conditions.

10.2. Chemical stability

Stable under normal conditions of use

10.3. Possibility of hazardous reactions

Avoid dust clouds, they may form explosible dust-air-mixture.
Reacts with halogenated compounds.
Reacts with acids, alkalis and oxidizing agents.
Reacts with alkalis, acids, halogenes and oxidizing agents.
Contact with acids and alkalis may release hydrogen.
Contact with water may release flammable gases.
Risk of dust explosion.

10.4. Conditions to avoid

No further relevant information available

10.5. Incompatible materials

No further relevant information available

10.6. Hazardous decomposition products

No further relevant information available

11) Toxicological Info

11.1. Information on toxicological effects

Acute toxicity

	Aluminium
Oral	LD-50 rats >2000mg/kg body weight
Inhalation	LC-50 rats 888 mg/m^3

Skin corrosion/irritation

Not classified

Serious eye damage/eye irritation

Not classified

Respiratory or skin sensitization

Not classified

Germ cell mutagenicity

Not classified

Carcinogenicity

Not classified

Reproductive toxicity

Not classified

Specific target organ toxicity - single exposure

Not classified

Specific target organ toxicity - repeated exposure

Not classified

Aspiration hazard

Not classified

12) Ecological Information

12.1. Ecotoxicity

Aluminium is not classed ecotoxic according to 67/548/EC Water hazard class (WGK): Generally not hazardous to water (self classification according to VwVwS)

13) Disposal Considerations

Product:

Remove in accordance with local official regulations. Dispose of at a hazardous waste landfill. Allocation of a waste code number (12 01 04) non-ferrous metal dusts and particles according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Used packaging material:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

14) Transport Information

	ADR/RID	**IMDG**	**IATA**
14.1 UN number	Not applicable	Not applicable	Not applicable
14.2 UN Proper shipping name	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.3 Transport Hazard Class(es)	Not Classified as hazardous for transport	Not Classified as hazardous for transport	Not Classified as hazardous for transport
14.4 Packing group	Not applicable	Not applicable	Not applicable
14.5 Environmental Hazards	Not Classified as hazardous	Not Classified as hazardous	Not Classified as hazardous
14.6 Special Precautions for user	(*)	(*)	(*)
14.7 Transport in Bulk according to Annex II	Not applicable	Not applicable	Not applicable

of Marpol73/78 and the IBC code			
14.8 Labelling	Not Applicable		
(*) – The transport, comprising charge and discharge, must be made by people who have been trained on 'Dangerous Goods Regulations'			

15) Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

The mixture is NOT subject to:
Regulation (EC) n. Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer;
Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants;
Regulation (EC) n. 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals.

15.2 Chemical Safety Assessment

Has been carried out for aluminium

16) Other Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

Products covered by this data sheet include:
99.7% Aluminium Powder - 63 micron
99.5% Aluminium Powder - 53 micron
99.7% Aluminium Powder - 250#
99.7% Aluminium Powder - 100/200#
99.7% Aluminium Powder - 120#
99.7% Aluminium Powder - 150#
99.7% Aluminium Powder - <5 micron

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Laws and References

Directive 2004/74/EC
Regulation EC n. 1907/2006 (REACH)
Regulation EC n. 2172/2008 (CLP)
Regulation EC n. 790/2009
Regulation EC n. 453/2010
ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG Code (International Maritime Dangerous Goods Code)
IATA (International Air Transport Association)
SAX'S, (Dangerous Properties of Industrial Materials)
ACGIH (2009) American Conference of Governmental Industrial Hygienists

Explosibility of Metal Powders, 1964. Authors: Murray Jacobson, Austin R. Cooper and John Nagy; researchers of the Bureau of Mines, Pittsburgh, Pa.

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