

MATERIAL SAFETY DATA SHEET**Aluminium Powder****Page 1 of 5****1.) Product & Company Identification**

Supplier : Me-Toz Metal Tozları Makina Yedek Parça San.Tic.Ltd.Şti.
Altintepe Mah. İlkbahar Çıkmazı Sk. No.3 K.2 D.3 Maltepe - İstanbul
Emergency Contact : TEL : 0090 216 489 45 40 GSM : 0090 532 282 3749
Manufacturer : Me-Toz Metal Tozları Makina Yedek Parça San.Tic.Ltd.Şti.
Altintepe Mah. İlkbahar Çıkmazı Sk. No.3 K.2 D.3 Maltepe - İstanbul
Product Name : Aluminium Powder

2.) Composition / Information on Ingredients

Composition % : Al %90 – 99,9
Particle Shape : Irregular
Appearance : Silvery grey powder, with variable grade size

3.) Hazards Identification

Eye Hazards : Causes irritation, redness, and pain.
Skin Hazards : May cause irritation with redness and pain.
Ingestion Hazards : Not considered toxic although aluminum chloride may form slowly in the digestive tract with nausea, vomiting, other gastrointestinal effects in extreme cases.
Inhalation Hazards : Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
Chronic Exposure : Pulmonary fibrosis from chronic inhalation has been reported. Chronic exposure has also produced numbness in fingers and (in one case) brain effects
Aggravation of Pre-existing Conditions : Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

Emergency Overview

WARNING! FLAMMABLE SOLID. DUST MAY FORM FLAMMABLE OR EXPLOSIVE MIXTURE WITH AIR, ESPECIALLY WHEN DAMP. HARMFUL IF INHALED. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. MAY AFFECT LUNGS. MAY CAUSE SKIN IRRITATION.

4.) First Aid Measures

Eye : Flush affected areas with water for at least 15 minutes. Seek medical assistance if necessary.
Skin : Remove contaminated clothing. Wash affected area with large quantities of water for at least five minutes. Seek medical assistance if necessary.
Ingestion : Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid if irritation or symptoms occur.
Inhalation : If signs and symptoms of toxicity are observed, remove subject from area, administer oxygen, and seek medical attention. Keep the subject warm and at rest. Perform artificial respiration if breathing has stopped.

MATERIAL SAFETY DATA SHEET**Aluminium Powder****Page 2 of 5****5.) Fire Fighting Measures**

Fire and Explosion Hazards : Autoignition temperature: 760C (1400F)
Explosive limits not determined. Aluminum powder is flammable and can burn violently in the presence of oxidizing substances and certain metal oxides. Bulk powder, when moistened with water, spontaneously heats. Hazard increases as fineness increases. Reactions with strong acids and alkalis causes the release of flammable hydrogen gas. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration: 0.04 oz/ft³. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde. Sensitive to static discharge.

Extinguishing Media : Smother with a suitable dry powder. Do NOT use water. Do NOT use halogenated extinguishing media. Pressure from the extinguishing media may cause severe dusting.

Fire Fighting Instructions : In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6.) Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Avoid contact with water. Pick up spill for recovery or disposal and place in a closed container.

7.) Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Protect from moisture. Avoid dust formation and control ignition sources. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and/or static electricity. Empty only into inert or non-flammable atmosphere. Emptying contents into a non-inert atmosphere where flammable vapors may be present could cause a flash fire or explosion due to electrostatic discharge. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

MATERIAL SAFETY DATA SHEET**Aluminium Powder****Page 3 of 5****8.) Exposure Controls / Personal Protection****Airborne Exposure Limits:**

-OSHA Permissible Exposure Limit (PEL): 15 mg/m³ (TWA) total dust and 5 mg/m³ (TWA) respirable fraction for Aluminum metal as Al

-ACGIH Threshold Limit Value (TLV): 10 mg/m³ (TWA) Aluminum metal dusts

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9.) Physical and Chemical Properties

Appearance : Fine, free-flowing, silvery powder.
Particle shape : Irregular
Colour : Silvery grey
Odour : Odourless
Physical State : Solid
Chemical Type : Pure
Boiling Point : 2327C (4221F)
Melting Point : 660C (1220F)
Vapor Pressure : 1 mm Hg @ 1284C (2343F)
Vapor Density : N/A
Solubility : Insoluble in water.

MATERIAL SAFETY DATA SHEET**Aluminium Powder****Page 4 of 5****10.) Stability and Reactivity**

Stability	: Stable under ordinary conditions of use and storage. Reacts with some acids and caustic solutions to produce hydrogen.
Hazardous Polymerization	: will not occur
Conditions To avoid (stability)	: Moisture, heat, flames, ignition sources and incompatibles.
Incompatible Materials	: Mercury, halocarbons, halogens, water (with bulk aluminum powder) strong oxidizing agents, some acids, bases and many other materials. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde...
Hazardous Decomposition Products	: Toxic metal fumes may form when heated to decomposition.

11.) Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

-----\Cancer Lists\-----

-----NTP Carcinogen-----

Ingredient	Known	--Anticipated	--- IARC Category
------------	-------	---------------	-------------------

Aluminum Metal (7429-90-5)	No	No	None
----------------------------	----	----	------

12.) Ecological Information

Environmental Fate : No information found.

Environmental Toxicity : No information found.

13.) Disposal Considerations

Dispose of unused or unusable product in accordance with applicable Federal, State/Provincial, and local regulations.

14.) Transport Information

Domestic (Land, D.O.T.)	Proper Shipping Name : Aluminium, Powder uncoated, (Non-Pyrophoric)
International (Water, I.M.O.)	Hazard Class : 4.3
International (Air, I.C.A.O.)	UN/NA : UN1396
	Packing Group : II
	Information reported for product/size: 500G

15.) Regulatory Information

Control of Substances Hazardous to Health Regulations.

MATERIAL SAFETY DATA SHEET

Aluminium Powder

Page 5 of 5

16.) Other Information

NFPA Ratings	: Health: 1 Flammability: 3 Reactivity: 1
Label Hazard Warning	: WARNING! FLAMMABLE SOLID. DUST MAY FORM FLAMMABLE OR EXPLOSIVE MIXTURE WITH AIR, ESPECIALLY WHEN DAMP. HARMFUL IF INHALED. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. MAY AFFECT LUNGS. MAY CAUSE SKIN IRRITATION
Label Precautions	: Keep away from heat, sparks and flame. Avoid breathing dust. Keep container closed. Wash thoroughly after handling. Do not contact with water. Use only with adequate ventilation.
Label First Aid	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. In case of skin contact, flush skin with plenty of water for at least 15 minutes. Call a physician if irritation develops

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of this product's use. Each individual must make his/her own determination as to the suitability of the information for such purpose(s) or use.

Metoz Metal Tozları Makine Yedek Parça San. Tic.Ltd.Şti.