

# MATERIAL SAFETY DATA SHEET

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## COMPANY IDENTIFICATION

### NAME OF MANUFACTURER:

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### 1. CHEMICAL PRODUCT NAME

Aluminum Powder

### 2. COMPOSITION /INFORMATION ON INGREDIENTS

CHEMICAL NAME	COMPOSITION ( wt%)	CAS No.	UN
AI	≥95.5%	7429-90-5	1309
铝	≥95.5%	7429-90-5	1309

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### 3. HAZARD IDENTIFICATION



**Signal word:** Dangerous

Dangerous cargo grade: 4.1 Combustible in the damp

Inhalation methods: Inhalation、skin contact

Health Hazard: Pulmonary fibrosis from chronic inhalation has been reported, causes irritation to eyes and respiratory tract, may affect lungs, may cause skin irritation.

Environmental Hazard: N/A

Explosion conditions:

In contact with water, emit flammable gases, Substances and mixtures of the second class.

Flammable Solid; Dust may form flammable or explosive mixture with air.

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## **4. FIRST AID MEASURES**

Due to the chemical reaction of aluminum powder, it may occurs flashover or reacts violently unpredictable results. And therefore any possible contacts with water should be avoided. Aluminum powder must be processed in inert and constant environment. Keep aluminum powder from moisture.

Prevention & Solution:

Workers should wear protective gloves, suits, eyeshades, masks prior to working with aluminum powder, in case of harmful gas, dust, smog, and steam released. To avoid any hazardous health risks, it is necessary for workers to shower and clean themselves thoroughly afterwards.

Reaction : Feather duster should be used in cleaning up the remains of aluminum powder. Sink in cool water or b

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## **5. FIRE-FIGHTING MEASURES & DATA**

Dangerous Property: 1. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

2. May cause flame when meeting water or damp air, when the temperature is high.

2. Reacts with oxidizer, may foam explosion with the flame, high heat.

4. Reacts with acids and caustic solutions to release of flammable hydrogen gas.

Hazardous Combustion product: Al<sub>2</sub>O<sub>3</sub>

Fire-fighting comments and measures:

Fire-fighters must wear Fire-fighting protective clothes.

If aluminum powder catches on fire, please extinguish it with dry sand or special powder. Do not use water, carbon dioxide, and CTC. Extinguishing by smothering.

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## **6. ACCIDENTAL RELEASE MEASURES**

Emergency action: Segregate the area of lead or spill, remove the sources of ignition and water from the polluted area.

Personnel protective measurements: wear dust-proof mask, heat-proof clothes and use the explosion prevention tools and equipment.

Environmental protective measurements:

Avoid powder flying, collect the Pick up spill for recovery or disposal and place in a closed and dry container.

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## **7. HANDLING AND STORAGE**

Handling:

Operators must pass special trade, obey the operating rules. Suggest operators wear filter-type dust-proof respirator, chemical safe goggles, static-free working clothes. Far away from sources of ignition and heat and smoking is not allowed in working area. Apply explosion prevention ventilation system and equipment. Avoid power flying and contact with oxidant, acids and alkalis. Load and unload slightly and protect package from breaking out. Prepare the related suitable extinguisher with full quantity and accidental release handling devices. It may leave harmful materials in emptied out containers.

Storage:

Store in day and ventilated warehouse. Be far away from sources of ignition and heat. Humidity of the warehouse should max 85%. Stored in separated place against oxidant, acids and alkalis and shouldn't be swapped. Use explosion prevention ventilation and lighting devices. Be not stored in long time to avoid out of date. Prepare the related suitable extinguisher with full quantity; There are suitable containers to pick up the leaking powder

## **8. EXPOSURE CONTROL / PERSONAL PROTECTIION**

China MAC (mg/m<sup>3</sup>) : NO Standard

Te former Soviet Union MAC (mg/m<sup>3</sup>) : 2[AL]

USA TLV-TWA: NO Standard TLVTN:ACGIH 10mg/m<sup>3</sup>[dust]/ 5mg/m<sup>3</sup> [welding smoke]

MSDS Material Safety Data

PERSONAL PROTECTIION:

Project Control: Operation in a closed devise, be well ventilated in the workshop. Supply the shower and safety devise.

Respiratory tract protection: must wear protective mask when contacting the powder, if necessary, please wear air-purifying respirators

Protection: Use chemical safety goggles.

Body protection: wear anti-static working clothes.

Hands' protection: wear anti-static gloves.

Additional information: No smoking, eating and drinking in the workshop, wash the hands before eating. Wash thoroughly and change the clothing after handling. Do physical examination regularly if contacting the powder with a long time.

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## **9. CHEMICAL PROPERTIES:**

Physical State: Flaky Powder

Appearance : Silver Gray Powder

Color. gray

Odor: odorless

PH: N/A

Viscosity: Not available.

Boiling Point: 2467 deg C

≥1.40 (Tap density)

Relative density of steam (air=1): No Data

Saturated vapor pressure: 0.13 (1284°C)

Burning hot: 822.9

Critical temperature (°C): Meaningless

Critical press (MPa): meaningless

Flash point: No Data

Auto ignition Temperature: 760 deg C ( 1,400.00 deg F)

Explosion Limits, lower: No data.

Solubility: react with water and ethanol, insoluble in other organic solvent

Mainly applications: metal pigment, chemical catalyst, powder and refractory material and so on.

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## 10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous Polymerization: Will not occur.

Avoid contact: fire, heat and humid air.

Conditions to Avoid: flames, heat, moisture

Taboo: water, acids, alkalis and strong oxidant.

Combustion product: Al<sub>2</sub>O<sub>3</sub>

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## 11. Toxicological Information

Acute toxicity: LD50: No Data

Irritation: light stimulate to eyes

Allergenicity: No Data

Sub-acute and chronic toxicity: No Data

### **Section 12 - ECOLOGICAL INFORMATION**

Biological effect: this substance is harmful to environment, please pay special attention to mammal

Biodegradable: no data

Non-biodegradable: no data

Bioconcentration: no data

Environmental migration: no data

### **Section 13 - DISPOSAL CONSIDERATIONS**

Dispose of in a manner consistent with federal, state, and local regulations.

### **Section 14 - TRANSPORT INFORMATION**

Dangerous goods code:41503

UN:1309

Packing mark: easy to flame material meet met

Packing group:II

Shipping Name: Not regulated.

### **Section 15 - LAWREGULATORY INFORMATION**

Dangerous chemical good regulations , the implementation of details of chemical safety management of danger goods regulations , regulations safety using chemical goods in workplast 1996, no.677 regulations safety using chemilca goods in workingplace1996,NO.423 labor deparment published etc , all give the regulation focus on hazardours chemical using, producing, storage , transportation and handing , the classification and markt of ususal dangerous chemical goods divided it into4.1 wet flammable materials , otehrs regulations , the dust explosion-proof safey of processing al and mg powder the standard of al aluminum powder content in workshop air and etc

**16.other information**

The information contained here is based on the present state of our knowledge , it is believed to be reliable but no representation , guarantee of any kind are made