

**MOLBASE**

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Al

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aluminium atom	
CAS No.:	7429-90-5
Synonyms:	aluminium Powder; diethyl(phenylethynyl)aluminum; Diethyl-(phenylethynyl)-aluminium; aluminum powder; aluminium phenyl acetylide; View More
Formula:	AlH3
Exact Mass:	30.00500
Molecular Weight:	30.00540
PSA:	0.00000
LogP:	0.33750

<	Overview	Properties	Synthesis Route	Precursor and ...	Safety Info	MSDS	NMR Spectrum	>
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aluminium atom 7429-90-5 MSDS**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifiers**

Product name : Aluminum
 REACH No. : 01-2119529243-45-XXXX
 CAS-No. : 7429-90-5

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

SECTION 2: Hazards identification**Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Flammable solids (Category 1), H228

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

F Highly flammable R11

For the full text of the R-phrases mentioned in this Section, see Section 16.

Label elements**Labelling according Regulation (EC) No 1272/2008**

Pictogram

Signal word Danger

Hazard statement(s)

H228 Flammable solid.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P370 + P378 In case of fire: Use sand for extinction.

Supplemental Hazard none

Statements

Other hazards - none**SECTION 3: Composition/information on ingredients****Substances**

Formula : Al

Molecular Weight : 26,98 g/mol

CAS-No. : 7429-90-5

EC-No. : 231-072-3

Registration number : 01-2119529243-45-XXXX

No components need to be disclosed according to the applicable regulations.

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Special powder against metal fire Dry sand Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Water Carbon dioxide (CO₂) ABC powder

Special hazards arising from the substance or mixture

Aluminum oxide

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

no data available

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store in original container. Do not store near combustible materials. Keep in a cool place away from acids. Keep in a cool place away from bases. Keep in a cool place away from oxidizing agents.

Handle and store under inert gas.

Specific end use(s)

A part from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Protective gloves against thermal risks

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

a) Appearance Form: powder

Colour: silver

b) Odour odourless

c) Odour Threshold no data available

d) pH no data available

e) Melting point/freezing Melting point/range: 660 °C point

f) Initial boiling point and 2.467 °C

boiling range

g) Flash point not applicable

h) Evaporation rate no data available

i) Flammability (solid, gas) The substance or mixture is a flammable solid with the category 1.

j) Upper/lower no data available

flammability or

explosive limits

k) Vapour pressure no data available

l) Vapour density no data available

m) Relative density 2,7 g/mL at 25 °C

n) Water solubility insoluble

o) Partition coefficient: n- no data available octanol/water

p) Auto-ignition not auto-flammable temperature

q) Decomposition not applicable temperature

r) Viscosity no data available

s) Explosive properties Risk of dust explosion.

t) Oxidizing properties no data available

Other safety information

no data available

SECTION 10: Stability and reactivity

Reactivity

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Risk of dust explosion.Reacts with water to generate Hydrogen gas.Reacts with the following substances:;

Acids, Bases, Oxidizing agents, Halogens

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.
Humid air water

Incompatible materials

Acids, Bases, Halogens, Oxidizing agents

Hazardous decomposition products

Other decomposition products - no data available
In the event of fire: see section 5

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

LD50 Oral - rat - > 2.000 mg/kg
LC50 Inhalation - rat - 4 h - > 888 mg/l

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: BD0330000
Cough, weight loss, anemia, Weakness, Incoordination.

SECTION 12: Ecological information**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

no data available

SECTION 13: Disposal considerations**Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**UN number**

ADR/RID: 1309 IMDG: 1309 IATA: 1309

UN proper shipping name

ADR/RID: ALUMINIUM POWDER, COATED
IMDG: ALUMINIUM POWDER, COATED
IATA: Aluminium powder, coated

Transport hazard class(es)

ADR/RID: 4.1 IMDG: 4.1 IATA: 4.1

Packaging group

ADR/RID: II IMDG: II IATA: II

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

no data available

SECTION 15 - REGULATORY INFORMATION

N/A

SECTION 16 - ADDITIONAL INFORMATION

N/A

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