

Globally Harmonized System of Classification and Labelling of  
Chemicals (GHS)

**STANDART PCA 501 Aluminium Powder**

Version 4.0

Revision Date 27.06.2024

Print Date 02.12.2024

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name : STANDART PCA 501 Aluminium Powder  
Material number : 049143D60

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

This information is not available.

**1.3 Details of the supplier of the safety data sheet**

Company : ECKART GmbH  
Guentersthal 4  
91235 Hartenstein  
Telephone : +499152770  
Telefax : +499152777008  
E-mail address : [msds.eckart@altana.com](mailto:msds.eckart@altana.com)  
Responsible/issuing person

**1.4 Emergency telephone number****NCEC:**

(contract no.: ECKART29003-NCEC)

+44 1235 239671 (Middle East/Africa, call and response in your language)

+1 215 207 0061 (Americas, call and response in your language)

+65 3158 1074 (Asia-Pacific, call and response in your language)

**SECTION 2: Hazards identification****GHS Classification**

: Flammable solids, Category 1, H228

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**Information concerning particular hazards for human and environment:**

Please refer to our website for further important safety instructions for handling aluminium powder:  
[http://www.eckart.net/fileadmin/eckart/Service/GDA\\_Alupulver\\_Safety\\_engl.pdf](http://www.eckart.net/fileadmin/eckart/Service/GDA_Alupulver_Safety_engl.pdf)

**GHS-Labeling**

Symbol(s)

:



Signal word

:

Danger

Hazard statements

:

H228: Flammable solid.

Precautionary statements

:

**Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground and bond container and receiving equipment.

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

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

**Response:**

P370 + P378 In case of fire: Use for extinction: Special powder for metal fires.

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

**Hazardous components which must be listed on the label****SECTION 3: Composition/information on ingredients**

Substance No.

:

**Hazardous components**

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Chemical name	CAS-No. EINECS-No.	Classification and labelling	Concentration[%]
aluminium	7429-90-5 231-072-3	Flam. Sol.;1;H228	50 - 100
Fatty acids, C14-18 and C16-18- unsatd.	67701-06-8 266-930-6	Acute Tox.;5;H313	1 - 10

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

General advice	: Move the victim to fresh air. Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	: Remove to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician. If on clothes, remove clothes.
In case of eye contact	: Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

This information is not available.

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### 4.3 Indication of any immediate medical attention and special treatment needed

This information is not available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Dry sand, Special powder against metal fire

Unsuitable extinguishing media : ABC powder, Carbon dioxide (CO<sub>2</sub>), Water, Foam

High volume water jet

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Contact with water liberates extremely flammable gas (hydrogen).

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : For safety reasons in case of fire, cans should be stored separately in closed containments. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use a water spray to cool fully closed containers.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.  
Evacuate personnel to safe areas.  
Avoid dust formation.

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Avoid breathing dust.  
Remove all sources of ignition.

**6.2 Environmental precautions**

General advice : The product should not be allowed to enter drains, water courses or the soil.  
Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

This information is not available.

**6.3 Methods and materials for containment and cleaning up**

Methods for cleaning up : Use mechanical handling equipment.  
Do not use a vacuum cleaner.  
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).  
Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For personal protection see section 8.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Advice on safe handling : Avoid creating dust. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.  
Store away from heat.

Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against : Use explosion-proof equipment. During processing, dust may

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## fire and explosion

form explosive mixture in air. Take measures to prevent the build up of electrostatic charge. When transferring from one container to another apply earthing measures and use conductive hose material.

Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from open flames, hot surfaces and sources of ignition.

## Hygiene measures

: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

**7.2 Conditions for safe storage, including any incompatibilities**Requirements for storage  
areas and containers

: Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen) Use explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use.

No smoking. Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

Further information on  
storage conditions

: Protect from humidity and water.


## Advice on common storage

: Do not store together with oxidizing and self-igniting products. Never allow product to get in contact with water during storage. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

## Other data

: Keep in a dry place. No decomposition if stored and applied as directed.

**7.3 Specific end use(s)**

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This information is not available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Germany:**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
aluminium	7429-90-5	AGW (Inhalable fraction)	10 mg/m <sup>3</sup>	2021-07-02	DE TRGS 900
Peak-limit: excursion factor (category)	2;(II)				
Further information	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
aluminium	7429-90-5	AGW (Alveolate fraction)	1,25 mg/m <sup>3</sup>	2021-07-02	DE TRGS 900
Peak-limit: excursion factor (category)	2;(II)				
Further information	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				

**United States of America (USA):**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
aluminium	7429-90-5	TWA (total dust)	50 Million particles per cubic foot	2012-07-01	
aluminium	7429-90-5	TWA (Respirable)	5 mg/m <sup>3</sup>	2013-10-08	
aluminium	7429-90-5	TWA (total dust)	15 mg/m <sup>3</sup>	2012-07-01	
aluminium	7429-90-5	TWA (total)	10 mg/m <sup>3</sup>	2013-10-08	
aluminium	7429-90-5	TWA (respirable fraction)	5 mg/m <sup>3</sup>	2012-07-01	
aluminium	7429-90-5	TWA (respirable)	15 Million particles	2012-07-01	

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		fraction)	per cubic foot		
aluminium	7429-90-5	PEL (Total dust)	10 mg/m <sup>3</sup>	2014-11-26	
aluminium	7429-90-5	PEL (respirable dust fraction)	5 mg/m <sup>3</sup>	2014-11-26	
aluminium	7429-90-5	TWA (Respirable particulate matter)	1 mg/m <sup>3</sup>	2008-01-01	
aluminium	7429-90-5	TWA	5 mg/m <sup>3</sup>	2005-09-01	
aluminium	7429-90-5	TWA (Total)	15 mg/m <sup>3</sup>	1989-01-19	
aluminium	7429-90-5	TWA (Respirable fraction)	5 mg/m <sup>3</sup>	1989-01-19	
aluminium	7429-90-5	TWA (total dust)	15 mg/m <sup>3</sup>	2011-07-01	
aluminium	7429-90-5	TWA (respirable fraction)	5 mg/m <sup>3</sup>	2011-07-01	
aluminium	7429-90-5	TWA (Total dust)	15 mg/m <sup>3</sup>	1989-01-19	
aluminium	7429-90-5	TWA (respirable dust fraction)	5 mg/m <sup>3</sup>	1989-01-19	
aluminium	7429-90-5	TWA (welding fumes)	5 mg/m <sup>3</sup>	2013-10-08	
aluminium	7429-90-5	TWA (pyro powders)	5 mg/m <sup>3</sup>	2013-10-08	
aluminium	7429-90-5	TWA (Respirable particulate matter)	1 mg/m <sup>3</sup>	2013-03-01	
aluminium	7429-90-5	TWA (Fumes)	5 mg/m <sup>3</sup>	1989-01-19	
aluminium	7429-90-5	PEL (Welding fumes)	5 mg/m <sup>3</sup>	2017-10-02	
aluminium	7429-90-5	PEL (Pyro powders)	5 mg/m <sup>3</sup>	2017-10-02	
aluminium	7429-90-5	TWA (powder)	5 mg/m <sup>3</sup>	1989-01-19	

### 8.2 Exposure controls

#### Personal protective equipment

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- Eye protection : Face-shield  
: Tightly fitting safety goggles
- Hand protection
- Material : Leather
- Glove length : Long sleeve gloves
- Remarks : Leather gloves
- The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.
- : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Anti-static and fire resistant protective clothing. DIN EN 11612; EN 533; EN 1149-1. Anti-static safety shoes.
- : Dust impervious protective suit
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : Use suitable breathing protection if workplace concentration requires.
- Breathing apparatus with filter.
- P1 filter

**Environmental exposure controls**

- General advice : The product should not be allowed to enter drains, water courses or the soil.
- : Prevent product from entering drains.
- Prevent further leakage or spillage if safe to do so.
- If the product contaminates rivers and lakes or drains inform respective authorities.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

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Appearance	: powder
Colour	: silver
Odour	: characteristic
pH	: substance/mixture is non-soluble (in water)
Melting point/range	: > 600 °C
Boiling point/boiling range	: No data available
Flash point	: No data available
Bulk density	: No data available
Flammability (solid, gas)	: The substance or mixture is a flammable solid with the category 1.
Smoldering temperature	: > 230 °C
Auto-flammability	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: 30 g/m <sup>3</sup>
Vapour pressure	: No data available
Density	: 2,5 g/cm <sup>3</sup> (ca. )
Solubility(ies)	
Water solubility	: insoluble
Miscibility with water	: immiscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Ignition temperature	: 340 °C
Thermal decomposition	: No data available
Viscosity, dynamic	: No data available

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Viscosity, kinematic : No data available  
Flow time : No data available

**9.2 Other information**

No data available

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

No decomposition if stored and applied as directed.

**10.2 Chemical stability**

No decomposition if stored and applied as directed.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Contact with acids and alkalis may release hydrogen.

No decomposition if stored and applied as directed.

Dust may form explosive mixture in air.

**10.4 Conditions to avoid**

Conditions to avoid : Heat, flames and sparks.

**10.5 Incompatible materials**Materials to avoid : Acids  
Bases  
Oxidizing agents  
Water**10.6 Hazardous decomposition products**

Other information : No data available

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

###### Components:

###### **Fatty acids, C14-18 and C16-18-unsatd. :**

Acute oral toxicity : LD50 Rat: > 5 000 mg/kg

Acute inhalation toxicity : LC50 Rat: > 46 mg/l

Exposure time: 1 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Rabbit: > 3 160 mg/kg

##### Skin corrosion/irritation

###### Product

May cause skin irritation and/or dermatitis.

##### Serious eye damage/eye irritation

###### Product

Product dust may be irritating to eyes, skin and respiratory system.

##### Respiratory or skin sensitisation

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No data available

**Carcinogenicity**

No data available

**Toxicity to reproduction/fertility**

No data available

**Reprod.Tox./Development/Teratogenicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

**Further information****Product**

No data available

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**SECTION 12: Ecological information****12.1 Toxicity**

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No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

No data available

**12.6 Other adverse effects****Product:**

Additional ecological : No data available  
information

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.

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Contaminated packaging : Send to a licensed waste management company.  
: Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

**SECTION 14: Transport information****14.1 UN number**

ADR : 1309  
TDG : 1309  
CFR : 1309  
IMDG : 1309  
IATA : 1309

**14.2 Proper shipping name**

ADR : ALUMINIUM POWDER, COATED  
TDG : ALUMINUM POWDER, COATED  
CFR : ALUMINUM POWDER, COATED  
IMDG : ALUMINIUM POWDER, COATED  
IATA : ALUMINIUM POWDER, COATED

**14.3 Transport hazard class**

ADR : 4.1  
TDG : 4.1  
CFR : 4.1  
IMDG : 4.1  
IATA : 4.1

**14.4 Packing group**

ADR

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Packaging group : II  
Classification Code : F3  
Hazard Identification Number : 40  
Labels : 4.1  
Tunnel restriction code : (E)

**TDG**

Packaging group : II  
Labels : 4.1

**CFR**

Packaging group : II  
Labels : 4.1

**IMDG**

Packaging group : II  
Labels : 4.1  
EmS Code : F-G, S-G

**IATA**

Packing instruction (cargo aircraft) : 448  
Packing instruction (passenger aircraft) : 445  
Packing instruction (LQ) : Y441  
Packaging group : II  
Labels : 4.1

**14.5 Environmental hazards****14.6 Special precautions for user****IMDG Code- segregation group:**



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: IMDG Code segregation group 15 - Powdered metals

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No data available

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	: Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	: Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	: Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	: Listed (aluminium powder (stabilised))
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Banned and/or restricted (aluminium powder (stabilised))

**15.2 Chemical safety assessment**

No data available

**SECTION 16: Other information****Full text of H-Statements**

H228 : Flammable solid.

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H313 : May be harmful in contact with skin.

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