

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

STANDART PCS 600 Aluminium Powder

Version 2.0

Revision Date 10.12.2019

Print Date 06.08.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : STANDART PCS 600 Aluminium Powder
Material number : 022553DF0

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 :

Telephone :
Telefax :
E-mail address : 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

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 name

: AL-PLV PCS 600

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Substance No. :

Hazardous components

| Chemical name | CAS-No. EINECS-No. | Classification and labelling | Concentration[%] |
|-------------------------------|------------------------|---------------------------------|------------------|
| aluminium powder (stabilised) | 7429-90-5 231-072-3 | Flam. Sol.;1;H228 | 50 - 100 |
| silicon dioxide | 7631-86-9 231-545-4 | Acute Tox.;5;H303 | 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 out of dangerous area.
Move the victim to fresh air.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.
Wash off immediately with soap and plenty of water.
- 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.

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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.

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 (CO₂), Water, Foam

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 : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Avoid dust formation.
Remove all sources of ignition.
Use personal protective equipment.
Evacuate personnel to safe areas.

6.2 Environmental precautions

Environmental precautions : 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.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Do not flush with water.
Keep in suitable, closed containers for disposal.

Use mechanical handling equipment.
Do not use a vacuum cleaner.

6.4 Reference to other sections

For personal protection see section 8.

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

Advice on safe handling : For personal protection see section 8. Smoking, eating and
drinking should be prohibited in the application area. Dispose
of rinse water in accordance with local and national
regulations.

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

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.

Use explosion-proof equipment. During processing, dust may 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.

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

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.

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.

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7.3 Specific end use(s)

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 powder (stabilised) | 7429-90-5 | AGW (Inhalable fraction) | 10 mg/m ³ | 2014-04-02 | DE TRGS 900 |
| Peak-limit: excursion factor (category) | | 2;(II) | | | |
| Further information | | Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission). | | | |
| aluminium powder (stabilised) | 7429-90-5 | AGW (Alveolate fraction) | 1,25 mg/m ³ | 2014-04-02 | DE TRGS 900 |
| Peak-limit: excursion factor (category) | | 2;(II) | | | |
| Further information | | Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission). | | | |
| silicon dioxide | 7631-86-9 | AGW (Inhalable fraction) | 4 mg/m ³ | 2013-09-19 | DE TRGS 900 |
| Further information | | Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).Colloidal amorphous silica, including pyrogenic silica and in wet processes manufactured silica (precipitated silica, silicagel).When there is | | | |

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| | 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 powder (stabilised) | 7429-90-5 | TWA (total dust) | 50 Million particles per cubic foot | 2012-07-01 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (Respirable) | 5 mg/m ³ | 2013-10-08 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (total dust) | 15 mg/m ³ | 2012-07-01 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (total) | 10 mg/m ³ | 2013-10-08 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (respirable fraction) | 5 mg/m ³ | 2012-07-01 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (respirable fraction) | 15 Million particles per cubic foot | 2012-07-01 | |
| aluminium powder (stabilised) | 7429-90-5 | PEL (Total dust) | 10 mg/m ³ | 2014-11-26 | |
| aluminium powder (stabilised) | 7429-90-5 | PEL (respirable dust fraction) | 5 mg/m ³ | 2014-11-26 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (Respirable fraction) | 1 mg/m ³ | 2008-01-01 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA | 5 mg/m ³ | 2005-09-01 | |
| aluminium | 7429-90-5 | TWA (Total) | 15 mg/m ³ | 1989-01-19 | |

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| | | | | | |
|-------------------------------|-----------|--------------------------------|-------------------------------------|------------|--|
| powder (stabilised) | | | | | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (Respirable fraction) | 5 mg/m ³ | 1989-01-19 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (total dust) | 15 mg/m ³ | 2011-07-01 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (respirable fraction) | 5 mg/m ³ | 2011-07-01 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (Total dust) | 15 mg/m ³ | 1989-01-19 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (respirable dust fraction) | 5 mg/m ³ | 1989-01-19 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (welding fumes) | 5 mg/m ³ | 2013-10-08 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (pyro powders) | 5 mg/m ³ | 2013-10-08 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (Respirable fraction) | 1 mg/m ³ | 2013-03-01 | |
| aluminium powder (stabilised) | 7429-90-5 | TWA (Fumes) | 5 mg/m ³ | 1989-01-19 | |
| aluminium powder (stabilised) | 7429-90-5 | PEL (Welding fumes) | 5 mg/m ³ | 2017-10-02 | |
| aluminium powder (stabilised) | 7429-90-5 | PEL (Pyro powders) | 5 mg/m ³ | 2017-10-02 | |
| silicon dioxide | 7631-86-9 | TWA (Dust) | 20 Million particles per cubic foot | 2012-07-01 | |
| silicon | 7631-86-9 | TWA (Dust) | 80 mg/m ³ / | 2012-07-01 | |

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| | | | | | |
|-----------------|-----------|-----|---------------------|------------|--|
| dioxide | | | %SiO ₂ | | |
| silicon dioxide | 7631-86-9 | TWA | 6 mg/m ³ | 2013-10-08 | |
| silicon dioxide | 7631-86-9 | PEL | 6 mg/m ³ | 2014-11-26 | |

8.2 Exposure controls
Personal protective equipment

Eye protection : Safety glasses

: Face-shield

Hand protection

Material : Leather

Glove length : Long sleeve gloves

 Remarks : The suitability for a specific workplace should be discussed
 with the producers of the protective gloves.

: 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.

Skin and body protection : Dust impervious protective suit

 Choose body protection according to the amount and
 concentration of the dangerous substance at the work place.

 : Anti-static and fire resistant protective clothing. DIN EN
 11612; EN 533; EN 1149-1. Anti-static safety shoes.

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Respiratory protection : Use suitable breathing protection if workplace concentration requires.
Breathing apparatus with filter.
P1 filter

Environmental exposure controls

General advice : 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.

Water :
: The product should not be allowed to enter drains, water
courses or the soil.

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

Appearance : powder
Colour : silver
Odour : odourless
pH : No data available
Freezing point : No data available
Boiling point/boiling range : No data available
Flash point : No data available

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|--|--|
| 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 | : No data available |
| Vapour pressure | : No data available |
| Density | : 2,5 g/cm ³ (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 |
| 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 : Stable under recommended storage conditions.
Contact with acids and alkalis may release hydrogen.
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

Hazardous decomposition products : No data available

Other information : No data available

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

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Acute toxicity**Components:****silicon dioxide :**

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

Mouse: 15 000 mg/kg

Acute inhalation toxicity : Rat: 0,139 mg/l

Exposure time: 4 h

Acute dermal toxicity : LD50 Rabbit: > 5 000 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Carcinogenicity

No data available

Toxicity to reproduction/fertility

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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

SECTION 12: Ecological information**12.1 Toxicity****Components:****silicon dioxide (7631-86-9) :**Toxicity to daphnia and other : (Daphnia (water flea)): 7 600 mg/l
aquatic invertebratesToxicity to algae : (Chlorella pyrenoidosa (aglae)): 440 mg/l
Exposure time: 72 h

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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 information : No data available

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.
Send to a licensed waste management company.
In accordance with local and national regulations.

Contaminated packaging : Empty remaining contents.

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Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
In accordance with local and national regulations.

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 Number : 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

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

15.2 Chemical safety assessment

No data available

SECTION 16: Other information**Full text of H-Statements**H228 : Flammable solid.
H303 : May be harmful if swallowed.

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