

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

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

1.1 Product identifier

Trade name : STANDART CHROMAL II Aluminium Powder
Product code : 049108D70 049108D70

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 of person responsible for the SDS : msds.eckart@altana.com

1.4 Emergency telephone number

GBK Gefahrgut Büro GmbH, Ingelheim, Germany:
From outside US : (001) 352-323-3500
(First call in English, response in your language is possible)
US & Canada (toll free) : 1-800-5355-053

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable solids, Category 1 H228: Flammable solid.

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)


SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

Hazard pictograms : 

Signal word : Danger

Hazard statements : H228 Flammable solid.

Precautionary statements : **Prevention:**
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/ eye protection/ face 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.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

| Chemical name | CAS-No. EC-No. Index-No. Registration number | Classification REGULATION (EC) No 1272/2008 | Concentration (% w/w) |
|-------------------------------|--|---|--------------------------|
| aluminium powder (stabilised) | 7429-90-5 231-072-3 013-002-00-1 01-2119529243-45 | Flam. Sol. 1; H228 | >= 50 - <= 100 |

For explanation of abbreviations 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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

| | | | |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Print Date: 19.11.2018 |
| 3.1 | 26.03.2018 | 102000000281 | Date of first issue: 07.10.2014 |

- If inhaled : 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 on skin, rinse well with water.
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

None known.

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

| | | | |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Print Date: 19.11.2018 |
| 3.1 | 26.03.2018 | 102000000281 | Date of first issue: 07.10.2014 |

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.
Remove all sources of ignition.

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 material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.
Do not use a vacuum cleaner.

Do not flush with water.
Keep in suitable, closed containers for disposal.

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

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.

Advice on protection against fire and explosion : 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.

Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : Wash hands before breaks and at the end of workday.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

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.

Further information on storage stability : Keep in a dry place. No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis (Version Date) |
|-------------------------------|-----------|---|-----------------------|----------------------|
| aluminium powder (stabilised) | 7429-90-5 | TWA (Respirable fraction) | 1,5 mg/m ³ | SK OEL (2007-06-20) |
| | | TWA (Inhalable fraction) | 4 mg/m ³ | SK OEL (2007-06-20) |
| | | TWA (Solid aerosols, total fraction) | 10 mg/m ³ | SK OEL (2007-06-20) |
| | | TWA (Solid aerosols, respirable fraction) | 1,5 mg/m ³ | SK OEL (2007-06-20) |

Biological occupational exposure limits

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|-------------------------------|-----------|---------------------------|-----------------|--------|
| aluminium powder (stabilised) | 7429-90-5 | Aluminium (Aluminium): 60 | No restrictions | SI OEL |

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

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|--|--|--|-----------------|--------|
| | | µg/g creatinine (Urine) | | |
| | | Aluminium (Aluminium): 0.2518 micromoles per millimole creatinine (Urine) | No restrictions | SI OEL |

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|-------------------------------|-----------|-----------------|------------------------------|------------------------|
| aluminium powder (stabilised) | Workers | Inhalation | long term – local effects | 3,72 mg/m ³ |
| | Consumers | Oral | long term – systemic effects | 3,95 mg/kg |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Substance name | Environmental Compartment | Value |
|-------------------------------|---------------------------|-------------|
| aluminium powder (stabilised) | Fresh water | 0,0749 mg/l |
| | clarification plant | 20 mg/l |

8.2 Exposure controls

Personal protective equipment

Eye protection : Face-shield
Safety glasses

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

| | | | |
|----------------|------------------------------|-----------------------------|---|
| Version 3.1 | Revision Date: 26.03.2018 | SDS Number: 102000000281 | Print Date: 19.11.2018 Date of first issue: 07.10.2014 |
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Environmental exposure controls

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 |
| Odour Threshold | : No data available |
| pH | : No data available |
| Melting point/freezing point | : 660 °C |
| Boiling point/boiling range | : 2.467 °C |
| Flash point | : No data available |
| Evaporation rate | : No data available |
| Flammability (solid, gas) | : The substance or mixture is a flammable solid with the category 1. |
| Self-ignition | : No data available |
| Auto-ignition temperature | : 340 °C |
| Smoldering temperature | : 230 °C |
| Decomposition temperature | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Upper explosion limit / Upper flammability limit | : No data available |
| Lower explosion limit / Lower flammability limit | : 30 g/m ³ |
| Vapour pressure | : No data available |
| Relative vapour density | : No data available |

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

| | | | |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Print Date: 19.11.2018 |
| 3.1 | 26.03.2018 | 102000000281 | Date of first issue: 07.10.2014 |

| | |
|--|-------------------------|
| Relative density | : No data available |
| Density | : 2,5 g/cm ³ |
| Bulk density | : No data available |
| Solubility(ies) | |
| Water solubility | : insoluble |
| Solubility in other solvents | : No data available |
| Partition coefficient: n-octanol/water | : No data available |
| Decomposition temperature | : 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

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. |
| | Stable under recommended storage conditions. |
| | 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 |
|--------------------|---|

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

10.6 Hazardous decomposition products

Contact with water or humid air : This information is not available.

Thermal decomposition : This information is not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity : LC50 (Rat): > 888 mg/l
Exposure time: 4 h

Components:

aluminium powder (stabilised):

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

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

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : No data available

SECTION 13: Disposal considerations

European Waste Catalogue : 12 01 04 - non-ferrous metal dust and particles
European Waste Catalogue : 10 03 21 - other particulates and dust (including ball-mill dust) containing dangerous substances

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

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

Contaminated packaging : 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.
In accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number

ADR : UN 1309
IMDG : UN 1309
IATA : UN 1309

14.2 UN proper shipping name

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

14.3 Transport hazard class(es)

ADR : 4.1
IMDG : 4.1
IATA : 4.1

14.4 Packing group

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

IMDG
Packing group : II
Labels : 4.1
EmS Code : F-G, S-G
Remarks : IMDG Code segregation group 15 - Powdered metals

IATA (Cargo)
Packing instruction (cargo aircraft) : 448
Packing instruction (LQ) : Y441
Packing group : II
Labels : Flammable Solid

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

Version 3.1 Revision Date: 26.03.2018 SDS Number: 102000000281 Print Date: 19.11.2018
Date of first issue: 07.10.2014

IATA (Passenger)

Packing instruction (passenger aircraft) : 445
Packing instruction (LQ) : Y441
Packing group : II
Labels : Flammable Solid

14.5 Environmental hazards

ADR

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

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

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of H-Statements

H228 : Flammable solid.

Full text of other abbreviations

Flam. Sol. : Flammable solids
SI OEL : Slovakia. Biological Limit Values
SK OEL : Slovakia. Chemical factors at work - Maximum acceptable exposure limits for chemical factors in the working environment
SK OEL / TWA : Long term exposure limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



STANDART CHROMAL II Aluminium Powder

| | | | |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Print Date: 19.11.2018 |
| 3.1 | 26.03.2018 | 102000000281 | Date of first issue: 07.10.2014 |

Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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