

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

## STANDART REFLEXAL 212 Aluminium Powder

Version 5.0

Revision Date 25.07.2022

Print Date 05.01.2023

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

#### 1.1 Product identifier

Trade name : STANDART REFLEXAL 212 Aluminium Powder  
Material number : 049131D70

Substance No. : CAS-No. : 7429-90-5  
Index-No. : 013-002-00-1  
EINECS-No. : 231-072-3

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

Use of the : Colouring agent  
Substance/Mixture

#### 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  
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)

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

: Flammable solids, Category 1, H228

**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**

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**SECTION 3: Composition/information on ingredients**

Substance No. : CAS-No. : 7429-90-5  
 Index-No. : 013-002-00-1  
 EINECS-No. : 231-072-3

**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

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 on clothes, remove clothes.

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- 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.

**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.

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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.  
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 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.

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 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.

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

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 : 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.

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- 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)

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 <sup>3</sup>	2014-04-02	DE TRGS 900
Peak-limit: excursion factor (category)		2;(II)			
aluminium powder (stabilised)	7429-90-5	AGW (Alveolate fraction)	1,25 mg/m <sup>3</sup>	2014-04-02	DE TRGS 900
Peak-limit: excursion factor (category)		2;(II)			

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

Components	CAS-No.	Value type	Control	Update	Basis
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		(Form of exposure)	parameters		
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/m3	2013-10-08	
aluminium powder (stabilised)	7429-90-5	TWA (total dust)	15 mg/m3	2012-07-01	
aluminium powder (stabilised)	7429-90-5	TWA (total)	10 mg/m3	2013-10-08	
aluminium powder (stabilised)	7429-90-5	TWA (respirable fraction)	5 mg/m3	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/m3	2014-11-26	
aluminium powder (stabilised)	7429-90-5	PEL (respirable dust fraction)	5 mg/m3	2014-11-26	
aluminium powder (stabilised)	7429-90-5	TWA (Respirable particulate matter)	1 mg/m3	2008-01-01	
aluminium powder (stabilised)	7429-90-5	TWA	5 mg/m3	2005-09-01	
aluminium powder (stabilised)	7429-90-5	TWA (Total)	15 mg/m3	1989-01-19	
aluminium powder (stabilised)	7429-90-5	TWA (Respirable fraction)	5 mg/m3	1989-01-19	



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

## 8.2 Exposure controls

### Personal protective equipment

Eye protection : Face-shield

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- Hand protection : Tightly fitting safety goggles
- 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 :
- : Prevent product from entering drains.

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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 : substance/mixture is non-soluble (in water)

Melting point/freezing point : 660 °C

Boiling point/boiling range : 2 467 °C

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>

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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
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.

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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

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

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitisation**

No data available

**Carcinogenicity**

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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**

No data available

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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.Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.

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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  
Packaging group : II  
Classification Code : F3



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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) : 448Packing 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:**

: IMDG Code segregation group 15 - Powdered metals

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### 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 (EU) 2019/1021 on persistent organic pollutants (recast)	: Not applicable
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	: Banned and/or restricted (aluminium powder (stabilised))

### 15.2 Chemical safety assessment

No data available

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

H228 : Flammable solid.

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.