

## SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 19.11.2018
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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : SILVERSHINE 415 Aluminium Paste

Material number : 023547G60

#### 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

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting effects.

##### Classification (67/548/EEC, 1999/45/EC)

R67: Vapours may cause drowsiness and dizziness.

Dangerous for the environment R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Other hazards

Combustible Solids

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.  
No information available.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
aluminium powder (stabilised)	7429-90-5 231-072-3 01-2119529243-45	F; R11	Flam. Sol. 1; H228	>= 50 - <= 100
low boiling point hydrogen treated naphtha	64742-48-9 918-481-9 01-2119457273-39	Xn; R65	Asp. Tox. 1; H304	>= 10 - < 20
solvent naphtha (petroleum), light arom.	64742-95-6 918-668-5 01-2119455851-35	Xn; R65 Xi; R37 N; R51/53 R10 R66 R67	Flam. Liq. 3; H226 Asp. Tox. 1; H304 STOT SE 3; H335, H336 Aquatic Chronic 2; H411	>= 5 - < 20

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

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

For explanation of abbreviations see section 16.

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : Move the victim to fresh air.  
Do not leave the victim unattended.
- No hazards which require special first aid measures.
- 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.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
- Remove contact lenses.  
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

- Symptoms : No information available.
- Risks : No information available.

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

- Treatment : No information available.
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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Dry sand  
Special powder against metal fire
- Unsuitable extinguishing media : Water  
Foam  
ABC powder  
Carbon dioxide (CO<sub>2</sub>)

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

- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
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### 5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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## SECTION 6: Accidental release measures

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

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

### 6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.  
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.  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
  
Sweep up and shovel.  
Do not flush with water.  
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 : Keep away from heat and sources of ignition.  
Avoid dust formation.  
Ensure adequate ventilation.

For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.

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

Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep container closed when not in use. Keep away from sources of ignition - No smoking.

Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Protect from humidity and water. Do not allow to dry.

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.

Storage class (TRGS 510) : 11, Combustible Solids

Other data : 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	NGV (Total)	5 mg/m <sup>3</sup>	SE AFS (2011-12-16)
Further information	Inhalable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.3 and having sampling characteristics as specified in paragraph 5.1. Respirable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.11 and having sampling characteristics as specified in paragraph 5.3. Total dust refers to all the particles (aerosols) trapped in a filter in the sampling apparatus described in Methods, Sampling of total dust and respirable dust, method nr 1010, published by the National Board of Occupational Safety and Health, now Work			

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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	Environment Authority. The filter diameter shall normally be 37 mm but can also be 25 mm. Despite its name, not the total amount of airborne particles is measured by this method.			
aluminium powder (stabilised)	7429-90-5	NGV (Respirable)	2 mg/m <sup>3</sup>	SE AFS (2011-12-16)
Further information	Inhalable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.3 and having sampling characteristics as specified in paragraph 5.1. Respirable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.11 and having sampling characteristics as specified in paragraph 5.3. Total dust refers to all the particles (aerosols) trapped in a filter in the sampling apparatus described in Methods, Sampling of total dust and respirable dust, method nr 1010, published by the National Board of Occupational Safety and Health, now Work Environment Authority. The filter diameter shall normally be 37 mm but can also be 25 mm. Despite its name, not the total amount of airborne particles is measured by this method.			
low boiling point hydrogen treated naphtha	64742-48-9	NGV	350 mg/m <sup>3</sup>	SE AFS (2015-11-12)
Further information	Indicative short term limit value shall be used as a recommended maximum value and should not be exceeded, The limit value refers to aliphatic hydrocarbons in vapour form, i.e. up to 12 carbon atoms. For exposure to hydrocarbons in aerosol form, particles or liquid droplets, the limit value for organic dust and mist, 5 mg/m <sup>3</sup> , is applicable. This limit does not apply to aromatic solvent naphtha (<2 weight percent) who have their own threshold.			
low boiling point hydrogen treated naphtha	64742-48-9	KTV	500 mg/m <sup>3</sup>	SE AFS (2015-11-12)
Further information	Indicative short term limit value shall be used as a recommended maximum value and should not be exceeded, The limit value refers to aliphatic hydrocarbons in vapour form, i.e. up to 12 carbon atoms. For exposure to hydrocarbons in aerosol form, particles or liquid droplets, the limit value for organic dust and mist, 5 mg/m <sup>3</sup> , is applicable. This limit does not apply to aromatic solvent naphtha (<2 weight percent) who have their own threshold.			
low boiling point hydrogen treated naphtha	64742-48-9	KTV	100 ppm 600 mg/m <sup>3</sup>	SE AFS (2015-11-12)
Further information	Indicative short term limit value shall be used as a recommended maximum value and should not be exceeded, Substance can be easily absorbed through the skin., Refers white spirits which are preferably used as solvents and thinners for paint and varnish products, ie petroleum naphtha with its main components in the range of C7 to C12, and with up to 22 weight percent aromatics (up to about 20 volume percent) and less than 0.1 weight per cent benzene. See also note 40 on petroleum naphtha. Stated approximate value in ppm is based on white spirit to 22 weight percent aromatics.			
low boiling point hydrogen treated naphtha	64742-48-9	NGV	50 ppm 300 mg/m <sup>3</sup>	SE AFS (2015-11-12)
Further information	Indicative short term limit value shall be used as a recommended maximum value and should not be exceeded, Substance can be easily absorbed			

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through the skin., Refers white spirits which are preferably used as solvents and thinners for paint and varnish products, ie petroleum naphtha with its main components in the range of C7 to C12, and with up to 22 weight percent aromatics (up to about 20 volume percent) and less than 0.1 weight per cent benzene. See also note 40 on petroleum naphtha. Stated approximate value in ppm is based on white spirit to 22 weight percent aromatics.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Naphtha (petroleum), hydrotreated heavy (64742-48-9)	Workers	Skin contact	long term – systemic effects	300 mg/kg
	Consumers	Ingestion	long term – systemic effects	300 mg/kg
	Consumers	Skin contact	long term – systemic effects	300 mg/kg
	Consumers	Inhalation	long term – systemic effects	900 mg/m3

### 8.2 Exposure controls

#### Personal protective equipment

Eye protection : Safety glasses

Hand protection  
Material : Solvent-resistant gloves

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Recommended preventive skin protection Skin should be washed after contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Long sleeved clothing  
Safety shoes  
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.

#### Environmental exposure controls



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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	: Pasty solid
Colour	: silver
Odour	: characteristic
Odour Threshold	: No data available
pH	: No data available
Freezing point	: No data available
Boiling point/boiling range	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: Combustible Solids
Auto-flammability	: not auto-flammable
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1,3 - 2,0 g/cm <sup>3</sup>
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
Ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: 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



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Hazardous reactions : Reacts with alkalis, acids, halogenes and oxidizing agents.  
Contact with acids and alkalis may release hydrogen.  
Mixture reacts slowly with water resulting in evolution of hydrogen.  
Vapour/air-mixtures are explosive at intense warming.

Stable under recommended storage conditions.

### 10.4 Conditions to avoid

Conditions to avoid : Do not allow to dry.

No data available

### 10.5 Incompatible materials

Materials to avoid : Acids  
Bases  
Oxidizing agents  
Highly halogenated compounds

### 10.6 Hazardous decomposition products

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

Thermal decomposition : This information is not available.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Components:

##### **7429-90-5:**

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

##### **64742-48-9:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

##### **64742-95-6:**

Acute oral toxicity : LD50 (Rat): 2.000 - 5.000 mg/kg

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Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

### Further information

#### Product:

Remarks: No data available

#### Components:

##### **64742-48-9:**

Remarks: Solvents may degrease the skin.

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## 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 : Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life with long lasting effects.

#### Components:

##### **64742-48-9:**

Additional ecological information : Remarks: No data available

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## SECTION 13: Disposal considerations

European Waste Catalogue : 12 01 04 - non-ferrous metal dust and particles

### 13.1 Waste treatment methods

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Product	: The product should not be allowed to enter drains, water courses or the soil. In accordance with local and national regulations.
Contaminated packaging	: In accordance with local and national regulations.

### SECTION 14: Transport information

#### 14.1 UN number

#### 14.2 UN proper shipping name

#### 14.3 Transport hazard class(es)

#### 14.4 Packing group

#### 14.5 Environmental hazards

#### 14.6 Special precautions for user

Remarks	: Not classified as dangerous in the meaning of transport regulations.
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#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 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
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#### 15.2 Chemical safety assessment

This information is not available.

### SECTION 16: Other information

#### Full text of R-Phrases

R10	: Flammable.
R11	: Highly flammable.
R37	: Irritating to respiratory system.
R51/53	: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	: Harmful: may cause lung damage if swallowed.
R66	: Repeated exposure may cause skin dryness or cracking.
R67	: Vapours may cause drowsiness and dizziness.

#### Full text of H-Statements

H226	: Flammable liquid and vapour.
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H228	: Flammable solid.
H304	: May be fatal if swallowed and enters airways.
H335	: May cause respiratory irritation.
H336	: May cause drowsiness or dizziness.
H411	: Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

Aquatic Chronic	: Chronic aquatic toxicity
Asp. Tox.	: Aspiration hazard
Flam. Liq.	: Flammable liquids
Flam. Sol.	: Flammable solids
STOT SE	: Specific target organ toxicity - single exposure

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 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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