

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

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

1.1 Product identifier

Trade name	:	SILVERSHINE 415 Aluminium Paste
Product code	:	023547G60

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

Use of the Substance/Mixture	:	Colouring agents, pigments
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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

NCEC: +44 1235 239670 (Europe)
Call and response in your language is possible.
Contract no.: ECKART29003-NCEC.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.
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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 Disposal:	Avoid release to the environment.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version 4.0 Revision Date: 13.02.2023 SDS Number: 102000020055 Print Date: 29.11.2024
Date of first issue: 03.01.2014

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	ClassificationREGUL ATION (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
Naphtha (petroleum), hydrotreated heavy; Low boiling point ydrogen treated naphtha	64742-48-9 918-481-9 01-2119457273-39	Asp. Tox. 1; H304	>= 10 - < 20
Solvent naphtha (petroleum), light arom.	64742-95-6 918-668-5 01-2119455851-35	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 10 - < 20

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.

No hazards which require special first aid measures.

If inhaled : If unconscious, place in recovery position and seek medical advice.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version 4.0	Revision Date: 13.02.2023	SDS Number: 102000020055	Print Date: 29.11.2024 Date of first issue: 03.01.2014
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If symptoms persist, call a physician.

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 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

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 (CO₂)

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.

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

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

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.

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.

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version 4.0 Revision Date: 13.02.2023 SDS Number: 102000020055 Print Date: 29.11.2024
Date of first issue: 03.01.2014

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.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
aluminium powder (stabilised)	7429-90-5	TWA (Inhalable)	10 mg/m ³	GB EH40
		TWA (Respirable fraction)	4 mg/m ³	GB EH40
		TWA (inhalable dust)	10 mg/m ³	GB EH40
Further information: For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable', Inhalable dust approximates to the fraction of airborne				

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version
4.0

Revision Date:
13.02.2023

SDS Number:
102000020055

Print Date: 29.11.2024
Date of first issue: 03.01.2014

	material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
		TWA (Respirable dust)	4 mg/m ³	GB EH40
	Further information: For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			

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 systemic effects	3.72 mg/m ³
	Workers	Inhalation	Long-term local effects	3.72 mg/m ³
	Consumers	Oral	Long-term systemic effects	3.95 mg/kg
Naphtha (petroleum), hydrotreated heavy; Low boiling point ydrogen treated naphtha	Workers	Inhalation	Acute systemic effects	1500 mg/m ³
	Workers	Skin contact	Long-term systemic effects	300 mg/kg
	Consumers	Ingestion	Long-term systemic effects	300 mg/kg

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version
4.0

Revision Date:
13.02.2023

SDS Number:
102000020055

Print Date: 29.11.2024
Date of first issue: 03.01.2014

	Consumers	Skin contact	Long-term systemic effects	300 mg/kg
	Consumers	Inhalation	Long-term systemic effects	900 mg/m3
Solvent naphtha (petroleum), light arom.	Workers	Inhalation	Long-term systemic effects	150 mg/m3
	Workers	Skin contact	Long-term systemic effects	25 mg/kg
	Consumers	Skin contact	Long-term systemic effects	11 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32 mg/m3
	Consumers	Inhalation	Long-term local effects	11 mg/kg
	Consumers	Ingestion	Long-term systemic effects	11 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/face 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

Respiratory protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Use suitable breathing protection if workplace concentration requires.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: Pasty solid
Colour	: silver
Odour	: characteristic
Odour Threshold	: No data available
Freezing point	: No data available
Boiling point/boiling range	: 140 - 200 °C
Flammability	: Combustible Solids
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: No data available
Auto-ignition temperature	: Not relevant
Decomposition temperature	: No data available
pH	: substance/mixture is non-soluble (in water)
Viscosity, kinematic	: No data available
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Density	: 1.3 - 2.0 g/cm ³
Relative vapour density	: No data available
Particle Size Distribution	:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

9.2 Other information

Explosives	:	Not explosive
Flammable solids	:	
Burning number	:	1
Self-ignition	:	not auto-flammable
Miscibility with water	:	immiscible

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	:	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.
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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
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10.6 Hazardous decomposition products

This information is not available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

Components:

aluminium powder (stabilised):

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

Naphtha (petroleum), hydrotreated heavy; Low boiling point ydrogen treated naphtha:

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

Acute inhalation toxicity : LC50 (Rat): Test atmosphere: vapour
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

Solvent naphtha (petroleum), light arom.:

Acute oral toxicity : LD50 (Rat): 3,492 mg/kg

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

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.

Components:

Naphtha (petroleum), hydrotreated heavy; Low boiling point ydrogen treated naphtha:

Germ cell mutagenicity- : Classified based on benzene content < 0.1% (Regulation (EC)
Assessment 1272/2008, Annex VI, Part 3, Note P)

Solvent naphtha (petroleum), light arom.:

Germ cell mutagenicity- : Classified based on benzene content < 0.1% (Regulation (EC)
Assessment 1272/2008, Annex VI, Part 3, Note P)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

Carcinogenicity

Not classified based on available information.

Components:

Naphtha (petroleum), hydrotreated heavy; Low boiling point hydrogen treated naphtha:

Carcinogenicity - : Classified based on benzene content < 0.1% (Regulation (EC)
Assessment 1272/2008, Annex VI, Part 3, Note P)

Solvent naphtha (petroleum), light arom.:

Carcinogenicity - : Classified based on benzene content < 0.1% (Regulation (EC)
Assessment 1272/2008, Annex VI, Part 3, Note P)

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

Solvent naphtha (petroleum), light arom.:

Assessment : May cause respiratory irritation., May cause drowsiness or
dizziness.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Components:

Naphtha (petroleum), hydrotreated heavy; Low boiling point hydrogen treated naphtha:

May be fatal if swallowed and enters airways.

Solvent naphtha (petroleum), light arom.:

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Further information

Product:

Remarks : No data available

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

SECTION 12: Ecological information

12.1 Toxicity

Components:

Solvent naphtha (petroleum), light arom.:

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

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 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product:

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

Components:

Naphtha (petroleum), hydrotreated heavy; Low boiling point hydrogen treated naphtha:

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 hazardous substances

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

13.1 Waste treatment methods

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 or ID number

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.2 UN proper shipping name

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.4 Packing group

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks	:	Not classified as dangerous in the meaning of transport regulations.
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14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Conditions of restriction for the following entries should be considered: aluminium powder (stabilised) (Number on list 40) Naphtha (petroleum), hydrotreated heavy; Low boiling point hydrogen treated naphtha (Number on list 3) Solvent naphtha (petroleum), light arom. (Number on list 3)
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	: Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	: Not applicable

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H226	: Flammable liquid and vapour.
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	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Flam. Liq.	: Flammable liquids
Flam. Sol.	: Flammable solids
STOT SE	: Specific target organ toxicity - single exposure
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; 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 -

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



SILVERSHINE 415 Aluminium Paste

Version	Revision Date:	SDS Number:	Print Date: 29.11.2024
4.0	13.02.2023	102000020055	Date of first issue: 03.01.2014

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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals 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

Classification of the mixture:

Aquatic Chronic 3 H412

Classification procedure:

Calculation method

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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