

Safety Data Sheet for Galvanised Silver Aerosol

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY NAME

Product Name Aerosol Electrobond Zinc Galv

Relevant identified uses of the substance or mixture and uses advised against
Surface Coating

Emergency Telephone Number +44 (0)161 205 7631 (Business hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Eye Irrit. 2	H319	Causes serious eye irritation.
Repr. 2	H361d	Suspected of damaging the unborn child.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02



GHS07



GHS08

Signal word

Danger

Hazard-determining components of labelling:

Toluene

Hazard statements

H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H304	May be fatal if swallowed and enters airways.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Buildup of explosive mixtures possible without sufficient ventilation.

2.3 Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Chemical characterisation: Mixtures**Description:**

Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 115-10-6 EINECS: 204-065-8	dimethyl ether Flam. Gas 1, H220; Press. Gas C, H280	50-100%
CAS: 123-86-4 EINECS: 204-658-1	Butyl ethanoate Flam. Liq. 3, H226; STOT SE 3, H336	10-25%
CAS: 78-93-3 EINECS: 201-159-0	methyl ethyl ketone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	2.5-10%
CAS: 108-88-3 EINECS: 203-625-9	Toluene Flam. Liq. 2, H225; Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 3, H412	2.5-10%
CAS: 141-78-6 EINECS: 205-500-4	Ethyl Acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	2.5-10%
CAS: 7429-90-5 EINECS: 231-072-3	aluminium Pyr. Sol. 1, H250; Water-react. 2, H261	≤2.5%
CAS: 7440-66-6 EINECS: 231-175-3	zinc powder -zinc dust (stabilized) Aquatic Acute 1, H400; Aquatic Chronic 1, H410	≤2.5%
CAS: 108-65-6 EINECS: 203-603-9	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226	≤2.5%
CAS: 67-64-1 EINECS: 200-662-2	propan-2-one Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	≤2.5%
EC number: 918-668-5	Solvent naphtha (petroleum), light arom. Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Acute Tox. 4, H332; STOT SE 3, H335-H336	≤2.5%
CAS: 64742-48-9 EINECS: 265-150-3	Low aromatic White Spirit Asp. Tox. 1, H304	≤2.5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures**After inhalation:**

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Do not induce vomiting; call for medical help immediately and show safety datasheet or label.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

Protective equipment:

Put on breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Information about fire - and explosion protection:

Do not spray onto a naked flame or any incandescent material. Keep ignition sources away - Do not smoke.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Observe official regulations on storing packagings with pressurised containers.

Information about storage in one common storage facility:

Not required.

Further information about storage conditions:

Keep receptacle tightly sealed and in a well-ventilated place. Keep away from heat.

7.3 Specific end use(s)

No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

115-10-6 dimethyl ether	
WEL	Short-term value: 958 mg/m ³ , 500 ppm Long-term value: 766 mg/m ³ , 400 ppm
123-86-4 Butyl ethanoate	
WEL	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
78-93-3 methyl ethyl ketone	
WEL	Short-term value: 899 mg/m ³ , 300 ppm Long-term value: 600 mg/m ³ , 200 ppm Sk, BMGV
108-88-3 Toluene	
WEL	Short-term value: 384 mg/m ³ , 100 ppm Long-term value: 191 mg/m ³ , 50 ppm Sk
141-78-6 Ethyl Acetate	
WEL	Short-term value: 400 ppm Long-term value: 200 ppm
108-65-6 2-methoxy-1-methylethyl acetate	
WEL	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk
67-64-1 propan-2-one	
WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm

DNELs

115-10-6 dimethyl ether		
Inhalative	DNEL	471 mg/m ³ (Con) 1,894 mg/m ³ (Ind)
123-86-4 Butyl ethanoate		
Oral	DNEL	2 mg/day (Con)
Dermal	DNEL	6 mg/day (Con) 11 mg/day (Ind)
Inhalative	DNEL	35.7 mg/m ³ (Con) 300 mg/m ³ (Ind)
78-93-3 methyl ethyl ketone		
Oral	DNEL	31 mg/day (Con)
Dermal	DNEL	412 mg/day (Con) 1161 mg/day (Ind)
Inhalative	DNEL	106 mg/m ³ (Con) 600 mg/m ³ (Ind)
108-88-3 Toluene		
Oral	DNEL	8.03 mg/day (Con)
Dermal	DNEL	226 mg/day (Con) 384 mg/m (Ind)
Inhalative	DNEL	56.5 mg/m ³ (Con) 192 mg/m ³ (Ind)
141-78-6 Ethyl Acetate		
Dermal	DNEL	37 mg/day (Con) 63 mg/day (Ind)
Inhalative	DNEL	367 mg/m ³ (Con) 734 mg/m ³ (Ind)
7440-66-6 zinc powder -zinc dust (stabilized)		
Oral	DNEL	0.83 mg/day (Con)
Dermal	DNEL	83 mg/day (Con) 83.3 mg/day (Ind)
Inhalative	DNEL	2.5 mg/m ³ (Con) 5 mg/m ³ (Ind)

108-65-6 2-methoxy-1-methylethyl acetate		
Oral	DNEL	36 mg/day (Con)
Dermal	DNEL	320 mg/day (Con)
Inhalative	DNEL	796 mg/day (Ind)
		33 mg/m ³ (Con)
		275 mg/m ³ (Ind)
67-64-1 propan-2-one		
Oral	DNEL	62 mg/day (Con)
Dermal	DNEL	62 mg/day (Con)
Inhalative	DNEL	186 mg/day (Ind)
		200 mg/m ³ (Con)
		1,210 mg/m ³ (Ind)
Solvent naphtha (petroleum), light arom.		
Oral	DNEL	11 mg/day (Con)
Dermal	DNEL	11 mg/day (Con)
Inhalative	DNEL	25 mg/day (Ind)
		32 mg/m ³ (Con)
		150 mg/m ³ (Ind)

PNECs

CAS No. 123-86-4 Butyl Acetate

Freshwater: 0.18 mg/l

Marine water: 0.018 mg/l

Fresh water sediment: 0.981 mg/kg

Marine sediment: 0.0981 mg/kg

Soil: 0.0903 mg/kg

STP (sewage-treatment plant): 35.6 mg/l

Intermittent use/release: 0.36 mg/l

Ingredients with biological limit values:

78-93-3 methyl ethyl ketone	
BMGV	70 µmol/L
	Medium: urine
	Sampling time: post shift
	Parameter: butan-2-one

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection:

Particulate cartridge filter type when LEV cannot be supplied

Protection of hands:

Not required.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses



Tightly sealed goggles

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Aerosol	Colour:	Grey
Odour:	Characteristic	Odour threshold:	Not determined.
pH-value:	Not determined.		

Change in condition

Melting point/freezing point:	Undetermined.	Initial boiling point and boiling range:	-24°C
Flash point:	-42°C	Flammability (solid, gas):	Not applicable.
Ignition temperature:	235°C	Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.	Explosive properties:	Heating may cause an explosion.

Explosion limits:

Lower:	3.0 Vol %	Upper:	18.6 Vol %
Vapour pressure at 20°C:	5200 hPa	Density at 20°C:	0.786 g/cm ³
Relative density	Not determined.	Vapour density	Not determined.

Evaporation rate Not applicable.

Solubility in / Miscibility with water: NOT MISCIBLE

Partition coefficient: n-octanol/water: Not determined.

Viscosity: Dynamic: Not determined.

Solvent content:

Organic solvents:	83.0 %	Kinematic:	Not determined.
		Solids content:	17.6 %

9.2 Other information

No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials:

No further relevant information available.

10.6 Hazardous decomposition products:

No dangerous decomposition products when stored and handled correctly

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

115-10-6 dimethyl ether		
Inhalative	LC50/4 h	164,000 mg/l (rat)
123-86-4 Butyl ethanoate		
Oral	LD50	10,760 mg/kg (rat)
Dermal	LD50	14,112 mg/kg (Rab)
Inhalative	LC50/4 h	23.4 mg/l (Rat)
78-93-3 methyl ethyl ketone		
Oral	LD50	3,460 mg/kg (Rat)
Dermal	LD50	5,000 mg/kg (Rab)
108-88-3 Toluene		
Oral	LD50	5,580 mg/kg (Rat)
Dermal	LD50	5,000 mg/kg (Rab)
Inhalative	LC50/4 h	20 mg/l (Rat)
141-78-6 Ethyl Acetate		
Oral	LD50	4,934 mg/kg (Rab)
Dermal	LD50	20,000 mg/kg (Rab)
Inhalative	LC50/4 h	1,600 mg/l (Rat)
7440-66-6 zinc powder -zinc dust (stabilized)		
Oral	LD50	>2,000 mg/kg (Rat)
Inhalative	LC50/4 h	5.41 mg/l (Rat)
108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (Rat)
Inhalative	LC50/4 h	>10.8 mg/l (Rat)
67-64-1 propan-2-one		
Oral	LD50	5,800 mg/kg (Rat)
Dermal	LD50	>15,800 mg/kg (Rat)
Inhalative	LC50/4 h	76 mg/l (Rat)
Solvent naphtha (petroleum), light arom.		
Oral	LD50	3,492 mg/kg (rat)
Dermal	LD50	3,160 mg/kg (Rab)
Inhalative	LC50/4 h	6,193 mg/l (rat)
64742-48-9 Low aromatic White Spirit		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rab)

Primary irritant effect: Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction) - Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Suspected of damaging the unborn child.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity:

Acute Fish toxicity

n-Butyl acetate

LC50 18 mg/l

Species: Pimephales promelas (fathead minnow)

Exposure duration: 96 h

Chronic Fish toxicity

n-Butyl acetate

No data available.

Acute toxicity for daphnia

n-Butyl acetate

EC50 44 mg/l

Species: Daphnia (water flea)

Exposure duration: 48 h

Chronic toxicity to daphnia

n-Butyl acetate

NOEC 23 mg/l

Species: Daphnia magna (Water flea)

Exposure duration: 21 d

Method: OECD Test Guideline 211

Acute toxicity for algae

n-Butyl acetate

EC50 675 mg/l

Species: Scenedesmus quadricauda (Green algae)

Exposure duration: 72 h

Acute bacterial toxicity

EC50 356 mg/l

Species: activated sludge

Exposure duration: 40 h

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:

Remark:

Harmful to fish

Additional ecological information:

General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Harmful to aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available.

13. DISPOSAL RECOMMENDATIONS

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation:

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1 UN-Number

ADR, IMDG, IATA UN1950

14.2 UN proper shipping name

ADR 1950 AEROSOLS
IMDG AEROSOLS
IATA AEROSOLS, flammable, containing substances in Division 6.1, Packing Group III

14.3 Transport hazard class(es)

ADR



Class 2 5TF Gases.

Label 2.1

IMDG, IATA



Class 2.1

Label 2.1

14.4 Packing group

ADR, IMDG, IATA Void

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user

Warning: Gases.

Danger code (Kemler): -

EMS Number: F-D,S-U

Stowage Code SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre:

Category A. For AEROSOLS with a capacity above 1 litre:

Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

Segregation Code

SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

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

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ) 120 ml
Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity
Transport category 1
Tunnel restriction code D

IMDG

Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

UN "Model Regulation": UN 1950 AEROSOLS, 2.1

15. REGULATORY INFORMATION

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 48, 52a

National regulations:

Technical instructions (air):

Class	Share in %
NK	83.0

Waterhazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H250 Catches fire spontaneously if exposed to air.
H261 In contact with water releases flammable gases.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Department issuing SDS: Product safety department: LABORATORY

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas C: Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Pyr. Sol. 1: Pyrophoric solids – Category 1
Water-react. 2: Substances and mixtures which in contact with water emit flammable gases – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

Legal Disclaimer:

The information supplied above is based upon the present state of our knowledge of the product at the time of publication. It is given in good faith and no warranty is implied with respect to the specification or quality of the product. The user must satisfy himself that the product is entirely suitable for his purpose