



Safety Data Sheet

Reusable Silver Conductive Ink AgFe/CA2



Section 1: Identification of the substance/mixture and of the company

1.1 Product Identifier

Product name: Recyclable Silver Conductive Ink

Product number: AgFe/PCL

Product description: Highly conductive silver paste ink for screen printing. The ink has been designed to facilitate magnetic recovery of the silver using the patent process. The ink uses dibasic ester as the primary solvent, which is non-flammable and non-toxic. The ink uses a biodegradable FDA approved polymers in the resin.

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

Identified uses: Printing ink paste; for screen printing or dispensing

1.3 Details of the supplier of the safety data sheet

Supplier: AilArian ltd
Bay Technology Centre
Baglan Energy Park
Port Talbot
SA12 7AX

1.4 Emergency contact details

Emergency number: +447539277355



Section 2: Hazards Identification

2.1 Classification of the substance or mixture

GHG Classification: Aquatic Chronic 1 – H410

Hazard Summary: Spilled material maybe slippery

2.2 Label Elements

Pictogram:



Signal word: Warning

Hazard statement: Very toxic to aquatic life with lasting effects

Precautionary statements: Avoid release to the environment

Collect spillage


Dispose of this material and its container to hazardous or special waste collection

2.3 Other Hazards

None known



Section 3: Composition/Information on ingredients

Ingredient	%W/W	Classification	Hazard Symbol
Silver coated ferrite particles	50-90	Aquatic Chronic 1 – H410	
Dibasic Ester	10-40	Not classified	
Polycaprolactone	0-15	Not classified	
Polycaprolactone diol	0-15	Not classified	
Ethyl cellulose	0-5	Not classified	

Separate MSDS sheets can be provided for component materials



Section 4: First Aid Measures

4.1 Description of first aid measures

Eye Contact: Irrigate with eyewash solution or clean water, holding

	eyelids apart, for at least 15 minutes. If symptoms persist obtain medical attention.
Skin Contact:	Wash affected skin with plenty of water. If symptoms occur obtain medical attention.
Inhalation:	In case of accidental inhalation: remove casualty to fresh air and keep at rest. If symptoms occur obtain medical attention.
Ingestion:	If swallowed, do not induce vomiting; seek medical advice immediately and show SDS or label.

4.2 Most important symptoms and effect, both acute and delayed

Sensitisation: this product contains materials which may trigger an allergic reaction upon skin contact. Allergic reactions can take place within 12-72 hours of exposure.

4.3 Indication of any immediate medical attention or special treatment needed

No specific recommendations. If in doubt seek medical attention.



Section 5: Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media: As appropriate for the surrounding fire

5.2 Special hazards arising from the substance or mixture

Product is not classified as flammable

5.3 Advice to firefighters

Control run-off water by containing and keeping out of sewers and water courses. If risk of water pollution occurs notify the appropriate authorities.



Section 6: Accidental Release Measures

6.1 Personal Protective Equipment

Wear personal protective equipment as described in section 8 of this datasheet

6.2 Environmental precautions

Prevent discharge into drains or watercourses

6.3 Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in containers for appropriate disposal.

6.4 Reference to other sections

See section 8 “Exposure controls and personal protective equipment”

See section 13 “Disposal Considerations”



Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid spilling. Avoid contact with skin or eyes.

7.2 Conditions for safe storage

Store in a cool dry location. Once open; carefully reseal and keep upright to prevent leakage.



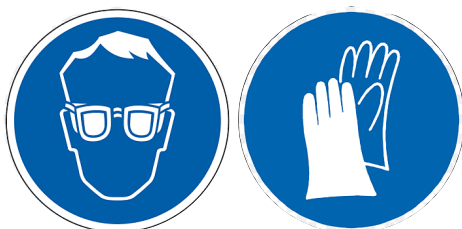
Section 8: Exposure Control/Personal Protection

8.1 Control Parameters

None known

8.2 Exposure Controls

Protective Equipment:



Engineering Controls:

Handle in a well-ventilated area

Eye/face protection:

Wear chemical splash goggles

Hand protection:

Appropriate chemical resistant gloves suitable

Other skin/body protection:

Appropriate clothing to prevent skin contact

Respiratory protection: no specific requirements



Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Light grey liquid
Odour:	Odourless
Odour Threshold:	Not applicable
pH (value):	Not applicable
Melting point:	30C
Freezing point:	Not applicable
Boiling point:	Undetermined > 100C
Evaporation Rate:	Not known
Flash point:	Not flammable
Flammability:	Not flammable
Explosive properties:	Not applicable
Oxidising properties:	Not applicable
Density:	Not known
Solubility:	Miscible with water
Viscosity:	2.2 Pa.s

9.2 Other Information

None specified



Section 10: Stability and Reactivity

10.1 Reactivity

Avoid contact with Acetylene, Acetylene compounds, ammonia, azirdine, bromine azide, 3-bromorpropyne, carboxylic acids, chlorine trifluoride, ethylene oxide ethyl hydroperoxide, ethyleneimine, hydrogen peroxide, iodoform, nitric acid, ozonides, oxalic acid, peroxomonosulfur.

10.2 Chemical stability

Stable under normal conditions



Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity – Ingestion:	Harmful by ingestion
Acute toxicity – Inhalation:	May be harmful if inhaled. Inhalation may cause irritation to the mucous membrane
Acute toxicity – Skin contact:	Contains silver which can cause argyria-grey pigmentation of the eyes, skin and mucous membranes with prolonged and repeated exposure.
Skin corrosion/irritation:	May cause irritation
Carcinogenicity:	None of the components are listed or known or suspected carcinogens
Reproductive toxicity:	No data available, no evidence of reproductive effects.
Specific target organ toxicity:	Single exposure – no data available. Repeated exposure – no data available.



Section 12: Ecological Information

12.1 Toxicity

Contains silver which is toxic to terrestrial and aquatic organisms. In fish and amphibian toxicity tests with 22 metals silver was the most toxic tested element as judged by acute LC50 values.

12.2 Persistence and degradability

Sorption and precipitation processes are effective in reducing the concentration of silver in natural waters and results in higher concentrations in bed sediments than in overlaying waters. Silver does not readily bioconcentrate in animals. Almost all of the total silver intake is usually excreted rapidly; less than 1% of the total silver intake is absorbed and retained, primarily as insoluble silver salts.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB



Section 13: Disposal Considerations

13.1 Waste treatment methods

Silver is a RCRA hazardous waste. Disposal should be in accordance with local or national legislation.

13.2 Recycling

These materials have been designed to facilitate recycling and separation of the conductive materials. This significantly reduces the toxicity of waste material. Waste material can be returned to the supplier for separation.



Section 14: Transport Information

14.1 UN number	Not available
14.2 UN shipping name	Not available
14.3 Transport hazard class	Not available
14.4 Packing group	Not available
14.5 Environmental hazard	Environmentally hazardous substance
14.6 Special precautions	Not classified as hazardous under DOT or US transport recommendations.



Section 15: Regulatory Information

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

EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
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15.2 Chemical risk assessment



No chemical risk assessment has been undertaken



Section 16: Other Information

Last updated:	01/03/2025
Created:	01/03/2025
Version:	1
Available documents:	SDS for component materials