SAFETY DATA SHEET

Electronically Conductive Paint

RS CHIP3 MSDS Date 01/11/04

1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Product name : **Electronically Conductive Paint**

Article number : 186-3593, 186-3600

Synonyms : Conductive Paint - Silver loaded

Use of the substance/preparation : Producing or repairing PCB track.

Company/undertaking identification

Supplier : RS Components Ltd
Birchington Road
Corby
Northants
NN17 9RS

Telephone : (01536) 402888

Fax : (01536) 401588

2. Composition/information on ingredients

Substance/Preparation : Preparation

Ingredient Name	CAS number	%	EC Number	Classification
SILVER	7440-22-4	35-65	231-131-3	
2-Methoxy-1-methylethyl acetate	108-65-6	10-30	203-603-9	R10 Xi; R36
n-butyl acetate	123-86-4	10-30	204-658-1	R10 R66, 67
See Section 16 for the full text of the R Phrases declared above				

*** Occupational Exposure Limit(s), if available, are listed in Section 8**

3. Hazards identification

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
Xi; R36
R66, 67

Physical/chemical Hazards : Flammable.

Human health hazards : Irritating to eyes.
Repeated exposure may cause skin dryness or cracking.
Vapours may cause drowsiness and dizziness.

See Section 11 for more detailed information on health effects and symptoms.

4. First aid measures

First aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Skin Contact : Wash with soap and water. Get medical attention if irritation develops.

Eye contact : In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Obtain medical attention immediately.

Specific treatments :

See Section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Extinguishing media : In case of fire, use water spray (fog), foam, dry chemical, or CO_2.

Special exposure hazards : Flammable liquid and vapour. Vapour may cause flash fire. Vapours may accumulate in low or confined areas, travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Not available.

Hazardous thermal decomposition products : These products are carbon oxides (CO, CO_2). Some metallic oxides.

Special protective equipment for fire-fighters : Fire-fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

6. Accidental release measures

Personal Precautions : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5). Do not touch or walk through spilled material.

Environmental precautions and cleanup methods : Minimize contact of spilled material with soils to prevent runoff to surface waterways. See Section 13 for Waste Disposal Information.

If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

Handling : Avoid contact with eyes. Keep container closed. Use only with adequate ventilation. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.

Storage : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Packaging materials

Recommended : Use original container.

Specific uses :

8. Exposure controls/personal protection

Ingredient Name	Occupational Exposure Limits
SILVER	**80/1107/EEC (Europe, 1991).** TWA: 0.01 ppm 8 hour(s).
2-Methoxy-1-methylethyl acetate	**EU OEL (Europe, 2000). Skin Notes: Indicative** STEL: 550 mg/m^3 15 minute(s). STEL: 100 ppm 15 minute(s). TWA: 275 mg/m^3 8 hour(s). TWA: 50 ppm 8 hour(s).
n-butyl acetate	**ACGIH TLV (United States, 2000).** STEL: 200 ppm 15 minute(s). TWA: 150 ppm 8 hour(s).

Exposure controls

Occupational exposure controls : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s).

Hand protection : Use latex gloves.

Eye protection : Safety glasses. Goggles, face shield, or other full-face protection if potential exists for direct exposure to aerosols or splashes.

Skin protection : Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits).

9. Physical and chemical properties

General information

Appearance

Physical state : Liquid.

Colour : Grey.

Odour : Not available.

Important health, safety and environmental information

pH : Not applicable.

Boiling point : 126.67°C (260°F)

Melting point : May start to solidify at -75°C (-103°F) based on data for: n-butyl acetate.

Flash point : Closed cup: 24.444°C (76°F). (Tagliabue.)

Explosive properties : Not considered as a product presenting risks of explosion.

Oxidising properties : Not available.

Vapour pressure : 0.8 kPa (6 mm Hg) (at 20°C)

Relative density : Weighted average: 0.92 g/cm^3

Solubility : Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Octanol/water partition coefficient : The product is insoluble in water and octanol.

Vapour density : >1 (Air = 1)

Evaporation rate (butyl acetate = 1) : <1 compared to Butyl acetate.

Other information

Auto-ignition temperature : The lowest known value is 420.9°C (789.6°F) (n-butyl acetate).

10. Stability and reactivity

Stability : The product is stable.

Hazardous Decomposition Products : These products are carbon oxides (CO, CO_2). Some metallic oxides.

11. Toxicological information

Potential Acute Health Effects

Inhalation : Practically non-toxic by inhalation.

Ingestion : No specific hazard.

Skin Contact : Slightly irritating to the skin.

Eye contact : Irritating to eyes.

Acute toxicity

Ingredient Name	Test	Result	Route	Species
2-Methoxy-1-methylethyl acetate	LD50	8532 mg/kg	Oral	Rat
n-butyl acetate	LD50	10768 mg/kg	Oral	Rat
	LD50	3200 mg/kg	Oral	Rabbit
	LD50	4300 mg/kg	Oral	Mammal
	LD50	>17600 mg/kg	Dermal	Rabbit

Over-exposure signs/symptoms

Target Organs : Contains material which causes damage to the following organs: mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea, nose/sinuses.

12. Ecological information

Other adverse effects : Not available.

13. Disposal considerations

Methods of disposal : Avoid contact of spilled material and runoff with soil and surface waterways. Dispose of according to all federal, state and local applicable regulations.

Waste Classification : A4070

European Waste Catalogue (EWC) : Not available.

Hazardous Waste : The classification of the product may meet the criteria for a hazardous waste

14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional Information
ADR/RID Class	1263	Paint.	3	III		-
ADN Class	1263	Paint.	3	III		-
IMDG Class	1263	Paint.	3	III		-
IATA-DGR Class	1263	Paint.	3	III		-

15. Regulatory information

EU Regulations

Hazard symbol(s) :

Irritant

Risk phrases : R10- Flammable.
R36- Irritating to eyes.

Safety Phrases : S2- Keep out of the reach of children.
S46- If swallowed, seek medical advice immediately and show this container or label.

Product Use : Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC, including amendments and the intended use.
- Industrial applications

EC Statistical Classification (Tariff Code) : 32089091

16. Other information

Full text of R phrases referred to in Sections 2 and 3 - Europe : R10- Flammable.
R36- Irritating to eyes.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapours may cause drowsiness and dizziness.

Full text of classifications referred to in Sections 2 and 3 - Europe : Xi - Irritant

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