

## MATERIAL SAFETY DATA SHEET

### SILVER CONDUCTIVE PAINT

#### 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>PRODUCT NAME</b>	SILVER CONDUCTIVE PAINT		
<b>PRODUCT NO.</b>	ESCP03B/ 26G/ 50G		
<b>PRODUCT USE</b>	Highly conductive silver loaded paint for track repair and pinpoint shielding		
<b>SUPPLIER</b>	<b>HK WENTWORTH-AMERICA</b>	<b>MANUFACTURER</b>	<b>EUROCHEMI - A division of HK WENTWORTH LTD</b>
	7101 South Adams Street		KINGSBURY PARK,
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	Willowbrook, IL 60527		SWADLINCOTE, DERBYSHIRE
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<b>EMERGENCY TELEPHONE</b>	(415) 895 1316 Monday to Friday between 8.30 a.m. and 5 p.m.		
<b>IDENTIFICATION No.</b>	1263		

#### 2 HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW

HIGHLY FLAMMABLE! Grey Liquid Stable under normal temperature conditions. Avoid heat, flames and other sources of ignition. Highly flammable. Vapors may cause drowsiness and dizziness. Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. Use only in well-ventilated areas. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get prompt medical attention. No hazard in normal industrial use.

##### POTENTIAL HEALTH EFFECTS

###### INHALATION

High concentrations of vapors may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

###### INGESTION

May cause stomach pain or vomiting.

###### SKIN CONTACT

Prolonged or repeated exposure may cause severe irritation.

###### EYE CONTACT

Irritating to eyes.

###### CARCINOGENICITY

Suspect cancer hazard (contains material which) may cause cancer.

#### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
1-ETHOXYPROPAN-2-OL	216-374-5	1569-02-4	30-60%
SILVER	231-131-3	7440-22-4	30-60%
ETHANOL	200-578-6	64-17-5	10-30%
ACETONE	200-662-2	67-64-1	5-10%
ETHYL ACETATE	205-500-4	141-78-6	1-5%
DIBUTYL PHTHALATE: DBP	201-557-4	84-74-2	<0.5%

#### 4 FIRST-AID MEASURES

## SILVER CONDUCTIVE PAINT

### NOTES TO THE PHYSICIAN

Treat symptomatically

#### INHALATION

Move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get prompt medical attention.

#### INGESTION

DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Rinse mouth thoroughly. Get medical attention.

#### SKIN CONTACT

Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention if irritation persists after washing.

#### EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

### 5 FIRE-FIGHTING MEASURES

#### EXTINGUISHING MEDIA

Use: Alcohol resistant foam. Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

#### SPECIAL FIRE FIGHTING PROCEDURES

Move container from fire area if it can be done without risk. Use water to keep fire exposed containers cool and disperse vapors.

#### UNUSUAL FIRE & EXPLOSION HAZARDS

Solvent vapors may form explosive mixtures with air. May explode when heated or when exposed to flames or sparks.

**AUTO IGNITION TEMPERATURE** 255 (491 F)  
(°C)

**FLAMMABILITY LIMIT - LOWER(%)** 1.3

**FLAMMABILITY LIMIT - UPPER(%)** 19

**FLASH POINT (°C)** 12 (53.6 F) CC (Closed cup).

### 6 ACCIDENTAL RELEASE MEASURES

#### SPILL CLEAN UP METHODS

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers.

### 7 HANDLING AND STORAGE

#### HANDLING

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Provide good ventilation.

#### STORAGE

Flammable/combustible - Keep away from oxidizers, heat and flames. Store in tightly closed original container in a cool, dry well-ventilated place. Keep in original container.

#### STORAGE CLASS

Flammable liquid storage.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### SILVER CONDUCTIVE PAINT

COMPONENT	STD	TWA (8-hrs)		STEL (15 min)		Notes
ACETONE	PEL	1000 ppm	2400 mg/m3			
ACETONE	ACGIH	500 ppm		750 ppm		A4
DIBUTYL PHTHALATE: DBP	ACGIH		5 mg/m3			
DIBUTYL PHTHALATE: DBP	PEL		5 mg/m3			
ETHANOL	ACGIH	1000 ppm				A4
ETHANOL	PEL	1000 ppm	1900 mg/m3			
ETHYL ACETATE	ACGIH	400 ppm				
ETHYL ACETATE	PEL	400 ppm	1400 mg/m3			
SILVER	PEL		0,01 mg/m3			as Ag
SILVER	ACGIH		0,1 mg/m3			
COMPONENT						IDLH
ACETONE						2500
DIBUTYL PHTHALATE: DBP						4000
ETHANOL						3300
SILVER						10

ACGIH = American Conference of Governmental Industrial Hygienists.  
 PEL = Permissible Exposure Limit (Occupational and Safety Health Administration)  
 A4 = Not Classified as a Human Carcinogen

**PROTECTIVE EQUIPMENT**



**ENGINEERING MEASURES**

All handling to take place in well-ventilated area.

**RESPIRATORY EQUIPMENT**

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Occupational Exposure Limit Use respiratory equipment with combination filter, type A2/P2.

**HAND PROTECTION**

Use protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Nitrile gloves are recommended.

**EYE PROTECTION**

Wear approved safety goggles.

**OTHER PROTECTION**

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

**HYGIENE MEASURES**

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE</b>	Liquid	<b>RELATIVE DENSITY</b>	1.7 @ 20 °c (68 F)
<b>COLOR</b>	Grey		
<b>ODOR</b>	Characteristic		
<b>SOLUBILITY</b>	Soluble in water		
<b>BOILING POINT (°C)</b>	56 - 132 (132.8 - 269.6 F)		

## SILVER CONDUCTIVE PAINT

<b>VOLATILE BY VOL. (%)</b>	50	<b>FLASH POINT (°C)</b>	12 (53.6 F) CC (Closed cup).
<b>VOLATILE ORGANIC CONTENT</b>	850 g/litre		

### 10 STABILITY AND REACTIVITY

#### STABILITY

Stable under normal temperature conditions.

#### CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition.

### 11 TOXICOLOGICAL INFORMATION

<b>Name</b>	ETHANOL
<b>Toxic Dose 1 - LD 50</b>	6200-17800 mg/kg (oral rat)
<b>Toxic Dose 2 - LD 50</b>	>20,000 mg/kg (oral-rbt)
<b>Toxic Conc. - LC 50</b>	8000 mg/l/4h (inh-rat)
<b>Name</b>	ACETONE
<b>Toxic Dose 1 - LD 50</b>	5800 mg/kg (oral rat)
<b>Toxic Dose 2 - LD 50</b>	20,000 mg/kg (oral-rbt)
<b>Toxic Conc. - LC 50</b>	76 ppm/4h (inh-rat)
<b>Name</b>	ETHYL ACETATE
<b>Toxic Dose 1 - LD 50</b>	5620 mg/kg (oral rat)
<b>Toxic Dose 2 - LD 50</b>	18,000 mg/kg (oral-rbt)
<b>Toxic Conc. - LC 50</b>	1600 ppm/4h (inh-rat)
<b>Name</b>	DIBUTYL PHTHALATE: DBP
<b>Toxic Dose 1 - LD 50</b>	8000 mg/kg (oral rat)
<b>Toxic Dose 2 - LD 50</b>	3050 mg/kg (ipr-rat)
<b>Toxic Conc. - LC 50</b>	7.9 mg/m <sup>3</sup> /30h (inh-rat)

### 12 ECOLOGICAL INFORMATION

#### ECOTOXICITY

There are no data on the ecotoxicity of this product. The product is not expected to be hazardous to the environment.

#### DEGRADABILITY

No data available.

<b>Name</b>	ETHANOL
<b>LC 50, 96 hrs, Fish mg/l</b>	8140
<b>EC 50, 48 hrs, Daphnia, mg/l</b>	9268
<b>IC 50, 72 hrs, Algae, mg/l</b>	>5000
<b>Name</b>	ACETONE
<b>LC 50, 96 hrs, Fish mg/l</b>	8300
<b>EC 50, 48 hrs, Daphnia, mg/l</b>	12600

#### Degradability

The product is easily biodegradable.

<b>Name</b>	ETHYL ACETATE
<b>LC 50, 96 hrs, Fish mg/l</b>	270
<b>EC 50, 48 hrs, Daphnia, mg/l</b>	2306

### 13 DISPOSAL CONSIDERATIONS

#### WASTE MANAGEMENT

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

#### DISPOSAL METHODS

Absorb in vermiculite or dry sand, dispose in licensed hazardous waste. Dispose of waste and residues in accordance with local authority requirements.

### 14 TRANSPORT INFORMATION

**SILVER CONDUCTIVE PAINT**



<b>DOT PROPER SHIPPING NAME</b>	PAINT INCLUDING PAINT, LACQUER, ENAMEL, STAIN, SHELLAC SOLUTIONS, VARNISH, POLISH, LIQUID FILLER, AND LIQUID LACQUER BASE		
<b>TDG SHIPPING NAME</b>	PAINT INCLUDING PAINT, LACQUER, ENAMEL, STAIN, SHELLAC SOLUTIONS, VARNISH, POLISH, LIQUID FILLER, AND LIQUID LACQUER BASE		
<b>IDENTIFICATION No.</b>	1263	<b>TUNNEL RESTRICTION CODE</b>	(D/E)
<b>CEFIC TEC(R) NO.</b>	30GF1-I+II, 30GF1-sp	<b>DOT HAZARD CLASS</b>	3
<b>DOT PACKING GROUP</b>	II	<b>U.S DOT HAZARD LABEL</b>	Flammable Liquid
<b>UN NO. SEA</b>	1263	<b>IMDG CLASS</b>	3
<b>IMDG PAGE NO.</b>	3	<b>IMDG PACK GR.</b>	II
<b>EMS</b>	F-E, S-E	<b>MFAG</b>	See Guide
<b>MARINE POLLUTANT</b>	No.	<b>UN NO. AIR</b>	1263
<b>AIR CLASS</b>	3	<b>AIR PACK GR.</b>	II
<b>TDG CLASS</b>	3	<b>TDG LABEL(S)</b>	3
<b>DOT PACKING GROUP</b>	II		

**15 REGULATORY INFORMATION**

**INVENTORIES**

COMPONENT	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
ETHANOL	DSL	Yes	EINECS	Yes				
ACETONE	DSL	Yes	EINECS	Yes				
ETHYL ACETATE	DSL	Yes						
DIBUTYL PHTHALATE: DBP	DSL	Yes	EINECS	Yes		Yes		
1-ETHOXYPROPAN-2-OL	DSL	Yes	EINECS	Yes				
SILVER	DSL	Yes	EINECS	Yes		Yes		

COMPONENT	TSCA 12(b) Export Notification
ETHANOL	No
ACETONE	No
ETHYL ACETATE	No
DIBUTYL PHTHALATE: DBP	No
1-ETHOXYPROPAN-2-OL	No
SILVER	No

### SILVER CONDUCTIVE PAINT

#### US FEDERAL REGULATIONS

COMPONENT	SARA 302-TPQ	CERCLA-RQ	SARA 313
ETHANOL		Not Listed	No
ACETONE		5 000 lbs	No
ETHYL ACETATE		5 000 lbs	No
DIBUTYL PHTHALATE: DBP		10 lbs	1.0 %
1-ETHOXYPROPAN-2-OL		Not Listed	No
SILVER		No RQ assigned	1.0 %

#### CLEAN AIR ACT

COMPONENT	CAA Accidental Release Prevention
ETHANOL	Not Listed
ACETONE	Not Listed
ETHYL ACETATE	Not Listed
DIBUTYL PHTHALATE: DBP	Not Listed
1-ETHOXYPROPAN-2-OL	Not Listed
SILVER	Not Listed

#### US STATE REGULATIONS

COMPONENT	CAS	CA	FL	MA	MN	NJ	PA	RI
ETHANOL	64-17-5	Not Listed	Yes	Yes	Yes	Yes	Yes	Yes
ACETONE	67-64-1	Not Listed	Yes	Yes	Yes	Yes	Yes	Yes
ETHYL ACETATE	141-78-6	Not Listed	Yes	Yes	Yes	Yes	Yes	Yes
DIBUTYL PHTHALATE: DBP	84-74-2	Not Listed	Yes	Yes	Yes	Yes	Yes	Yes
1-ETHOXYPROPAN-2-OL	1569-02-4	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
SILVER	7440-22-4	Not Listed	Yes	Yes	Yes	Yes	Yes	Yes

#### REGULATORY STATUS (US)

SECTION 313: This product contains toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. TSCA: The ingredients of this product are on the TSCA Inventory.

#### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS

#### LABEL(S) FOR SUPPLY



Flammable  
Liquid.

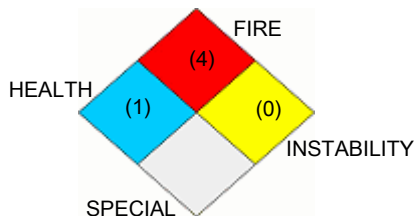
#### 16 OTHER INFORMATION

### SILVER CONDUCTIVE PAINT

#### HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

HEALTH	2
FLAMMABILITY	4
PHYSICAL	0
PERSONAL PROTECTION	B

#### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



#### ISSUED BY

Pawel Zmarzly

#### REVISION DATE

FEBRUARY 2009

#### VERSION No.

0

#### SDS NO.

10548

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