



## Safety Data Sheet according to (EC) No 1907/2006

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LOCTITE ECI 1010 0.2KG E&C

SDS No. : 537534  
V001.2

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Replaces version from: 16.04.2015

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

#### 1.1. Product identifier

LOCTITE ECI 1010 0.2KG E&C

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

Intended use:

Conductive PTF ink

#### 1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@uk.henkel.com

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

Acute hazards to the aquatic environment

Category 1

H400 Very toxic to aquatic life.

Chronic hazards to the aquatic environment

Category 1

H410 Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Label elements (CLP):

##### Hazard pictogram:



##### Signal word:

Warning

##### Hazard statement:

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement:** P273 Avoid release to the environment.  
**Prevention**

**2.3. Other hazards**  
None if used properly.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	231-131-3 01-2119555669-21	50- 100 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor: 1.000 M factor (Chron Aquat Tox): 1.000
Ethylene glycol, monobutyl ether acetate 112-07-2	203-933-3 01-2119475112-47	10- 20 %	Acute Tox. 4; Inhalation H332 Acute Tox. 4; Dermal H312

**For full text of the H - statements and other abbreviations see section 16 "Other information".  
Substances without classification may have community workplace exposure limits available.**

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

**Inhalation:**  
Move to fresh air. If symptoms persist, seek medical advice.

**Skin contact:**  
Rinse with running water and soap.  
Obtain medical attention if irritation persists.

**Eye contact:**  
Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

**Ingestion:**  
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

#### 4.2. Most important symptoms and effects, both acute and delayed

Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).

Prolonged or repeated contact may cause skin irritation.

Prolonged or repeated contact may cause eye irritation.

#### 4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

### SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media:

water, carbon dioxide, foam, powder

#### Extinguishing media which must not be used for safety reasons:

High pressure waterjet

### 5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

In case of fire, keep containers cool with water spray.

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

#### Additional information:

In case of fire, keep containers cool with water spray.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Remove sources of ignition.

### 6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

### 6.3. Methods and material for containment and cleaning up

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

### 6.4. Reference to other sections

See advice in section 8

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid skin and eye contact.

See advice in section 8

#### Hygiene measures:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

### 7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Keep away from sources of ignition.

Keep container tightly sealed.

Refer to Technical Data Sheet

### 7.3. Specific end use(s)

Conductive PTF ink

<b>SECTION 8: Exposure controls/personal protection</b>
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**8.1. Control parameters****Occupational Exposure Limits**Valid for  
Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):		EH40 WEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECLTV
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE]	50	332	Short Term Exposure Limit (STEL):		EH40 WEL
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE]	20	133	Time Weighted Average (TWA):		EH40 WEL
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE]	20	133	Time Weighted Average (TWA):	Indicative	ECLTV
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE]	50	333	Short Term Exposure Limit (STEL):	Indicative	ECLTV

**Occupational Exposure Limits**Valid for  
Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECLTV
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE] (EGBEA)	50	333	Short Term Exposure Limit (STEL):	Indicative OELV	IR_OEL
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE] (EGBEA)	20	133	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE] (EGBEA)			Skin designation:	Can be absorbed through the skin.	IR_OEL
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE]	20	133	Time Weighted Average (TWA):	Indicative	ECLTV
2-Butoxyethyl acetate 112-07-2 [2-BUTOXYETHYL ACETATE]	50	333	Short Term Exposure Limit (STEL):	Indicative	ECLTV

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:  
Ensure good ventilation/extraction.

Respiratory protection:  
Ensure adequate ventilation.  
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area  
Filter type: A (EN 14387)

Hand protection:  
Chemical-resistant protective gloves (EN 374).  
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):  
nitrile rubber (NBR; >= 0.4 mm thickness)  
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):  
nitrile rubber (NBR; >= 0.4 mm thickness)  
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:  
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.  
Protective eye equipment should conform to EN166.

Skin protection:  
Wear suitable protective clothing.  
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Appearance	paste
	silver
Odor	Acetate
Odour threshold	No data available / Not applicable
pH	Not applicable
Initial boiling point	186 °C (366.8 °F)
Flash point	71 °C (159.8 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	2,2 g/cm <sup>3</sup>
( )	
Bulk density	No data available / Not applicable
Viscosity	10.000 mPa.s
( )	
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable

Solubility (qualitative)	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

## 9.2. Other information

No data available / Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reaction with strong oxidants.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

Heat, flames, sparks and other sources of ignition.

### 10.5. Incompatible materials

None if used properly.

### 10.6. Hazardous decomposition products

Hydrocarbons  
carbon oxides.  
nitrogen oxides

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

#### Dermal toxicity:

Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).

#### Skin irritation:

Prolonged or repeated contact may cause skin irritation.

#### Eye irritation:

Prolonged or repeated contact may cause eye irritation.

**Acute oral toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Ethylene glycol, monobutyl ether acetate 112-07-2	LD50	2.300 mg/kg	oral		rat	

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethylene glycol, monobutyl ether acetate 112-07-2	not irritating		rabbit	BASF Test

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethylene glycol, monobutyl ether acetate 112-07-2	not irritating		rabbit	BASF Test

**SECTION 12: Ecological information****General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**12.1. Toxicity****Ecotoxicity:**

Do not empty into drains / surface water / ground water.  
Very toxic to aquatic life with long lasting effects.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	EC50	0,00024 mg/l	Daphnia	48 h	Daphnia magna	Not specified
Ethylene glycol, monobutyl ether acetate 112-07-2	LC50	80 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
Ethylene glycol, monobutyl ether acetate 112-07-2	EC50	37 mg/l	Daphnia	48 h	Daphnia magna	
Ethylene glycol, monobutyl ether acetate 112-07-2	EC10	> 500 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
	EC50	> 500 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
Ethylene glycol, monobutyl ether acetate 112-07-2	EC10	720 mg/l	Bacteria	17 h		

**12.2. Persistence and degradability****Persistence and Biodegradability:**

No data available for the product.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method

Ethylene glycol, monobutyl ether acetate 112-07-2	readily biodegradable	aerobic	76 %	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)
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**12.3. Bioaccumulative potential / 12.4. Mobility in soil****Mobility:**

No data available for the product.

**Bioaccumulative potential:**

No data available for the product.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Ethylene glycol, monobutyl ether acetate 112-07-2	1,51					OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

**12.5. Results of PBT and vPvB assessment**

Hazardous components CAS-No.	PBT/vPvB
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria

**12.6. Other adverse effects**

No data available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Product disposal:

Do not empty into drains / surface water / ground water.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

080312

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.



**SECTION 14: Transport information****14.1. UN number**

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

**14.2. UN proper shipping name**

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Silver)

**14.3. Transport hazard class(es)**

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

**14.4. Packing group**

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

**14.5. Environmental hazards**

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

**14.6. Special precautions for user**

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**VOC content < 40 %  
(2010/75/EC)**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

## SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

### **Further information:**

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

**Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.**