



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

Page 1 of 8

LOCTITE EDAG PF 410 E&C known as ELECTRODAG PF-410  
0.4 KG

SDS No. : 364264  
V004.1  
Revision: 21.05.2015  
printing date: 20.04.2021  
Replaces version from: 12.08.2014

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

#### 1.1. Product identifier

LOCTITE EDAG PF 410 E&C known as ELECTRODAG PF-410 0.4 KG

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

Intended use:  
PTF ink

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

Henkel AG & Co. KGaA  
Henkelstr. 67  
40589 Düsseldorf

Germany

Phone: +49 211 797 0  
Fax-no.: +49 211 798 2009

ua-productsafety.de@henkel.com

#### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

### SECTION 2: Hazards identification

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

##### Classification (CLP):

Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
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:** H319 Causes serious eye irritation.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement:** P280 Wear eye protection/face protection.  
**Prevention**

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

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

**Base substances of preparation:**  
solvent  
Pigment

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Carbinol acetate 112-15-2	203-940-1	25- 50 %	Eye Irrit. 2 H319
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	231-131-3	> 50 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor: 1.000 M factor (Chron Aquat Tox): 1.000

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, consult doctor if complaint persists.

**Skin contact:**  
Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

**Eye contact:**  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**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**  
EYE: Irritation, conjunctivitis.

**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:

Carbon dioxide, foam, powder  
Water spray jet

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

High pressure waterjet

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

Formation of toxic gases is possible during heating or in fires.

### 5.3. Advice for firefighters

Wear full protective clothing.  
Wear self-contained breathing apparatus.

#### Additional information:

Cool endangered containers with water spray jet.

## SECTION 6: Accidental release measures

#### General information:

Danger of slipping on spilled product.

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

Avoid skin and eye contact.  
Ensure adequate ventilation.

### 6.2. Environmental precautions

Do not empty into drains / surface water / ground water.  
Do not allow to enter the ground / soil.

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

Take up with liquid-absorbing material (sand).  
Dispose of contaminated material as waste according to Section 13.

### 6.4. Reference to other sections

See advice in section 8

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Gloves and safety glasses should be worn  
Vapours should be extracted to avoid inhalation.  
Avoid open flames and sources of ignition.

#### Hygiene measures:

Keep away from food, beverages and animal feed.

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

Ensure good ventilation/extraction.  
Temperatures between + 5 °C and + 30 °C

### 7.3. Specific end use(s)

PTF ink

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Germany

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	ECLTV
Silver 7440-22-4			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Silver 7440-22-4		0,1	Exposure limit(s):	8	TRGS 900

#### Biological Exposure Indices:

None

### 8.2. Exposure controls:

#### Engineering controls:

Ensure good ventilation/suction at the workplace.

#### Respiratory protection:

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter. This recommendation should be matched to local conditions.

#### 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): Isobutylene-isoprene rubber (IIR;  $\geq 0.7$  mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Isobutylene-isoprene rubber (IIR;  $\geq 0.7$  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:

Goggles which can be tightly sealed.

#### Skin protection:

Suitable protective clothing

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	liquid
	liquid
	silver
Odor	Solvent
Odour threshold	No data available / Not applicable
pH	Not applicable
Initial boiling point	217 °C (422.6 °F)
Flash point	110 °C (230 °F); no method
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	2,5 g/cm <sup>3</sup>
( )	

Bulk density	No data available / Not applicable
Viscosity (Brookfield; Instrument: RVT; 20 °C (68 °F); speed of rotation: 20 min-1)	10.000 - 25.000 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
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	
lower	1,0 %(V)
upper	19,0 %(V)
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.  
Peroxides can be formed.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

No decomposition if stored and applied as directed.

### 10.5. Incompatible materials

See section reactivity

### 10.6. Hazardous decomposition products

None if used for intended purpose.  
In case of fire toxic gases can be released.

## 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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

#### Skin irritation:

Prolonged or repeated contact may cause skin irritation.

#### Eye irritation:

Causes serious 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)

**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
---------------------------------	---------------	-------	-------------------------	------------------	---------	--------

**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
---------------------------------	---------------	-------	-------------------------	------------------	---------	--------

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Carbinol acetate 112-15-2	slightly irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Carbinol acetate 112-15-2	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

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

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

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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**Other adverse effects:**

The product contains organic solvents which are insoluble in water. According to the requirements of the ATV regulations for the discharge of wastewater from commercial and industrial plant, organic solvents which are immiscible with water can only be discharged to an extent which corresponds to their solubility in water. The local discharge regulations take precedence.

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

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential / 12.4. Mobility in soil**

No data available.

**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:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

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.

080312

## 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. Packaging 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 73/78 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 25,4 %  
(1999/13/EC)**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**National regulations/information (Germany):**

WGK: WGK = 3, highly water endangering product. Classification according to the mixture rules in German VwVwS regulation annex 4 from 27 July 2005.

Storage class according to TRGS 510: 10

**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:

H319 Causes serious eye irritation.

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.**