



Revision Number: 002.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE EDAG PF 407A E&C known as ELECTRODAG PF-407A 1 KG
Product type: PTF ink
Restriction of Use: None identified
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 1239125

Region: United States

Contact information:
 Telephone: +1 (860) 571-5100
 MEDICAL EMERGENCY Phone: Poison Control Center
 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC
 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: FLAMMABLE LIQUID AND VAPOR.
 CAUSES SKIN IRRITATION.
 CAUSES SERIOUS EYE IRRITATION.
 MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	3
SKIN IRRITATION	2
EYE IRRITATION	2A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response: If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Diethylene glycol monobutyl ether	112-34-5	40 - 50
Methoxypropyl acetate 2-	108-65-6	20 - 30
Graphite	7782-42-5	10 - 20
Carbon black	1333-86-4	5 - 10
2-Butoxyethanol	111-76-2	0.1 - 1

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Acids. Aldehydes. Ketones. Toxic fumes. Irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways. Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Dispose of according to Federal, State and local governmental regulations.
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Clean-up methods:

Remove all sources of ignition. Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

Handling:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Keep container closed.

Storage:

For safe storage, store between -20 °C (-4°F) and 50 °C (122°F) Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Diethylene glycol monobutyl ether	10 ppm TWA Inhalable fraction and vapor.	None	None	50 ppm TWA 75 ppm STEL
Methoxypropyl acetate 2-	None	None	50 ppm TWA	None
Graphite	2 mg/m3 TWA Respirable fraction.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust. 15 MPPCF TWA	None	None
Carbon black	3 mg/m3 TWA Inhalable fraction.	3.5 mg/m3 PEL	None	None
2-Butoxyethanol	20 ppm TWA	50 ppm (240 mg/m3) PEL (SKIN)	None	None

Engineering controls:

Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection:

Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Eye/face protection:

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

Skin protection:

Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid

Color:

Black

Odor:

Solvent

Odor threshold:

Not available.

pH:

Not available.

Vapor pressure:

Not available.

Boiling point/range:

146 °C (294.8 °F)

Melting point/ range:

Not determined

Specific gravity:	1.120
Vapor density:	Not available.
Flash point:	47 °C (116.6 °F)
Flammable/Explosive limits - lower:	0.7 % (Air)
Flammable/Explosive limits - upper:	7 % (Air)
Autoignition temperature:	> 204 °C (> 399.2 °F)
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Soluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	655 g/l
Viscosity:	30,000 cp
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Acids. Aldehydes. Ketones. Toxic fumes. Irritating vapors.
Incompatible materials:	Oxidizing agents. Acids. Bases. Amines. Ammonia. Chlorine. Chlorates. Aluminum. Fluorine.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
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Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system. Drowsiness. Dizziness.

Skin contact: Causes skin irritation.

Eye contact: Causes serious eye irritation.

Ingestion: Not expected under normal conditions of use.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Diethylene glycol monobutyl ether	Oral LD50 (Rabbit) = 2,200 mg/kg Oral LD50 (Rat) = 4,500 mg/kg Oral LD50 (Rat) = 5,660 mg/kg Oral LD50 (Rat) = 7,292 mg/kg Oral LD50 (Mouse) = 2,400 mg/kg Oral LD50 (Rat) = 6,600 mg/kg Oral LD50 (Rat) = 6,560 mg/kg Dermal LD50 (Rabbit) = 2,700 mg/kg Dermal LD50 (Rabbit) = 4,120 mg/kg	Blood, Central nervous system, Irritant, Kidney
Methoxypropyl acetate 2-	None	Irritant, Central nervous system
Graphite	None	Lung
Carbon black	Oral LD50 (Rat) = > 8,000 mg/kg	Respiratory, Some evidence of carcinogenicity
2-Butoxyethanol	Oral LD50 (Rat) = 560 mg/kg Oral LD50 (Mouse) = 1.2 g/kg Oral LD50 (Rabbit) = 0.32 g/kg Oral LD50 (Rat) = 1.48 g/kg Oral LD50 (Mouse) = 1,519 mg/kg Dermal LD50 (Rabbit) = 400 mg/kg	Blood, Central nervous system, Irritant, Kidney, Liver

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Diethylene glycol monobutyl ether	No	No	No
Methoxypropyl acetate 2-	No	No	No
Graphite	No	No	No
Carbon black	No	Group 2B	No
2-Butoxyethanol	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. D001: Ignitable.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Printing ink

Hazard class or division: 3

Identification number: UN 1210

Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Printing ink
Hazard class or division: 3
Identification number: UN 1210
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: PRINTING INK
Hazard class or division: 3
Identification number: UN 1210
Packing group: III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis.
CERCLA/SARA Section 311/312: Fire, Immediate Health, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Diethylene glycol monobutyl ether (CAS# 112-34-5). 2-Butoxyethanol (CAS# 111-76-2).
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Regulatory Affairs

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