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MATERIAL SAFETY DATA SHEET

NAME: LIQUID PAPER CORRECTION FLUID (WHITE AND COLORS, LPCF-4, LPCF-8, LPCF-9)

CAS NO: NA **Effective Date:** 11/28/89 **Rev:** NA

A. - IDENTIFICATION

Composition*	%	
1,1,1-Trichloroethane (71-55-6) Titanium Dioxide (13463-67-7) Resin(s) Mineral Spirits (64741-65-7) Di(2-ethylhexyl)Phthalate (117-81-7) Mustard Oil (57-06-7) Colorant(s)		Formula: Mixture Molecular Weight: NA Synonyms: Liquid Paper

B. - PHYSICAL DATA

Boiling Point: 165 °F 74 °C	Melting Point: NA °F NA °C	Freezing Point: NA °F NA °C
Specific Gravity (H_2O=1): ~1.7	Vapor Density (air=1): ~4.5	Vapor Pressure @ 68 °F: 100 mmHg
Evaporation (Ether =1): Slower	Saturation in Air (by volume @ °F): NA %	Autoignition Temperature: °F °C NA
% Volatiles (by volume): ~50	Solubility in Water: <1%	pH: NA

Appearance/Odor	White or colored fluid with a pungent solvent odor
Flash Point and Test Method(s)	>200°F, >93°C (Closed Cup) Product is non-flammable.
Flammable Limits in Air (% by volume)	(See Section H.) Lower NA % Upper NA %

C. - REACTIVITY

Stability		Conditions to Avoid	Polymerization		Conditions to Avoid
stable	X	Contact with open flame or other high temperature source.	may occur		NA
unstable			will not occur	X	

Incompatible Materials	For solvent: strong alkalis, oxidizers; aluminum, zinc and other reactive metals (e.g., potassium, sodium, magnesium).
Hazardous Decomposition Products	Thermal degradation, e.g., open flame, can produce small amounts of phosgene, hydrogen chloride and chlorine.

*IF MULTIPLE INGREDIENTS INCLUDE CAS NUMBERS FOR EACH NA=NOT AVAILABLE

Footnotes:

Physical data, except % Volatiles and Specific Gravity, refers to 1,1,1-Trichloroethane.

D. — HEALTH HAZARD DATA

Occupational Exposure Limits (PEL'S, TLV'S, etc.)

8 Hour TWA's: 1,1,1-Trichloroethane - 350 ppm (OSHA/ACGIH)
Titanium Dioxide - 10 mg/cu m (OSHA/ACGIH)
Di(2-ethylhexyl)Phthalate - 5 mg/cu m (OSHA/ACGIH)

These levels are not anticipated under foreseeable use conditions.

Warning Signals

NA

Routes/Effects of Exposure

1. Inhalation None anticipated under foreseeable use conditions. If vapors are deliberately concentrated and inhaled (abuse), following symptoms may occur: respiratory irritation, dizziness, drowsiness, headache, nausea, unconsciousness, cardiac sensitization (abnormal heartbeat), coma and death. (Mustard oil is added to the product as an abuse deterrent.)
2. Ingestion

   None anticipated under foreseeable use conditions. Depending on amount ingested, most of the symptoms described above may occur. Estimated LD_{50} in rats is greater than 5 ml/kg or between 1 pint and 1 quart in humans (ref. Gosselin, Smith and Hodge, Clinical Toxicology of Commercial Products, 5th ed., 1984).
3. Skin

   a. Contact

   None anticipated under foreseeable use conditions. Irritation may occur if contact is prolonged/repeated.

   b. Absorption

   None anticipated under foreseeable use conditions. Solvent can be absorbed through skin (prolonged contact), but not likely in acutely toxic amounts. Estimated LD_{50} in rabbits is greater than 5 ml/kg.
4. Eye Contact

   Irritation
5. Other

   See Statement Below

E. — ENVIRONMENTAL IMPACT

1. **Applicable Regulations**

   NA
2. DOT Hazard Class —
3. DOT Shipping Name —

Environmental Effects NA

Other: Based on animal feeding studies, Di(2-ethylhexyl)Phthalate or DEHP is listed by IARC and NTP as a possible human carcinogen, if ingested. Normal use of this product would result in no ingestion of DEHP. There is no evidence of cancer due to isolated incidents of ingestion, such as accidental ingestion. A quantitative risk assessment demonstrates that DEHP in Liquid Paper is not a significant risk to humans because of its low concentration and low exposure potential.

F. - EXPOSURE CONTROL METHODS

Engineering Controls

None under normal use conditions

Eye Protection

None under normal use conditions

Skin Protection

None under normal use conditions

Respiratory Protection

None under normal use conditions

Other

Product is non-hazardous when used as directed in an office/room with normal air circulation.

G. - WORK PRACTICES

Handling and Storage

No unusual handling or storage when used as directed; when stored in large quantities (as in warehouse), it should be in a well-ventilated, cool area.

Normal Clean Up

Pick up spills with towels, tissues, etc. and place in trash.

Waste Disposal Methods

Dispose as regular trash.

H. EMERGENCY PROCEDURES

Steps to be taken if material is released to the environment or spilled in the work area

Not applicable

Fire and Explosion Hazard	Extinguishing Media
Concentrated vapor of 1,1,1-Trichloroethane can burn, producing hazardous decomposition products (Sec. C).	As for adjacent fire: dry chemical, foam, carbon dioxide, water fog

Firefighting Procedures

In fires involving large quantities of product, use self-contained breathing apparatus.

I. FIRST AID AND MEDICAL EMERGENCY PROCEDURES

Eyes

Flush with plenty of water. If irritation persists, obtain medical attention.

Skin

Wash with soap and water.

Inhalation

None normally anticipated. In abuse situation, if breathing has stopped, administer artificial respiration and seek medical attention immediately.

Ingestion

Consult physician.

Notes to Physician

The formulation contains less than 5% petroleum distillates. Induction of vomiting should be considered at the discretion of the physician. Do not use sympathomimetic agents (e.g., epinephrine) in halogenated hydrocarbon poisoning because of possible induction of ventricular fibrillation.