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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: 8/22/90

Rev: 1

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 ₂ O=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 (See Section H.)
 (% by volume) 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** No adverse effects anticipated from normal use. 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**
No adverse effects anticipated from normal use. Depending on amount ingested, most of the symptoms described above may occur. Estimated LD₅₀ 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**
No adverse effects anticipated from normal use. Irritation may occur if contact is prolonged/repeated.
 - b. **Absorption**
No adverse effects anticipated from normal use. Solvent can be absorbed through skin (prolonged contact), but not likely in acutely toxic amounts. Estimated LD₅₀ 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.

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.

Waste Disposal Methods

Dispose in accordance with applicable federal, state and local laws.

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

Concentrated vapor of 1,1,1-Trichloroethane can burn, producing hazardous decomposition products (Sec. C).

Extinguishing Media

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

No adverse effects anticipated from normal use. In an abuse situation, remove from source of exposure. Treat symptomatically. Oxygen may be administered. Seek medical attention immediately and refer to "Notes to Physician" below.

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.

The information contained in the Material Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.