**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**

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

**B. - PHYSICAL DATA**

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Melting Point</th>
<th>Freezing Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 °F</td>
<td>NA °F</td>
<td>NA °C</td>
</tr>
<tr>
<td>74 °C</td>
<td>NA °C</td>
<td>NA °C</td>
</tr>
<tr>
<td>Specific Gravity (H₂O=1)</td>
<td>Vapor Density (air=1)</td>
<td>Vapor Pressure @ 68 °F</td>
</tr>
<tr>
<td>~1.7</td>
<td>~4.5</td>
<td>100 mmHg</td>
</tr>
<tr>
<td>Evaporation</td>
<td>Saturation in Air</td>
<td>Autoignition Temperature</td>
</tr>
<tr>
<td>Ether =1</td>
<td>(by volume @</td>
<td>°F)</td>
</tr>
<tr>
<td>Slower</td>
<td>NA %</td>
<td>NA °F</td>
</tr>
<tr>
<td>% Volatiles (by volume)</td>
<td>Solubility in Water</td>
<td>pH</td>
</tr>
<tr>
<td>~50</td>
<td>&lt;1</td>
<td>NA</td>
</tr>
</tbody>
</table>

**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.)

<table>
<thead>
<tr>
<th>(% by volume)</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA %</td>
<td>NA %</td>
<td></td>
</tr>
</tbody>
</table>

**C. - REACTIVITY**

<table>
<thead>
<tr>
<th>Stability</th>
<th>Conditions to Avoid</th>
<th>Polymerization</th>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>stable</td>
<td>Contact with open flame or other high temperature source.</td>
<td>may occur</td>
<td>NA</td>
</tr>
<tr>
<td>unstable</td>
<td></td>
<td>will not occur</td>
<td>X</td>
</tr>
</tbody>
</table>

**Incompatible Materials:** For solvent: strong alkalies; 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
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.
### 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.

#### Waste Disposal Methods

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

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

Not applicable

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

**Firefighting Procedures**

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

---

**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.