



HILLSBORO ELEMENTARY SCHOOLS

215 S.E. 6th Ave.
HILLSBORO, OR 97123

MATERIAL SAFETY DATA SHEET

SC 0012

MATERIAL SAFETY DATA SHEET

NAME: LIQUID PAPER PEN AND INK CORRECTION FLUID

CAS NO: NA

Effective Date: 8/22/90 Rev: 4

A - IDENTIFICATION

Composition*	%	Formula:	Mixture
1,1,1-Trichloroethane (71-55-6)		Molecular Weight:	NA
Titanium Dioxide (13463-67-7)		Synonyms	Pen and Ink
Resins, Dispersants, Colorants			
Mustard Oil (57-06-7)			

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) 1.32 @ 25/25°C	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 fluid with a pungent solvent odor

Flash Point and Test Method(s) None (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 sources.	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 for % Volatiles, 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)

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), the 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

NA

E - ENVIRONMENTAL IMPACT

1. Applicable Regulations

NA

2. OOT Hazard Class -

3. DOT Shipping Name -

Environmental Effects

NA