### MATERIAL SAFETY DATA SHEET

Identity(As Used on Label and List): RISOGRAPH INK LD (black/red/blue/brown/green)

SECTION I

Manufacturer's Name: RISO INC.

Emergency Telephone Number: 508-777-7377 Telephone Number for Information: 508-777-7377

Address

: 300 Rosewood Drive, Suite 210, Danvers, WA 01923

Date Prepared

: June 7, 1994

Signature of Preparer

Trade Name and Synonyms: Risograph Ink LD(Item Code) black(S-5(9),

red(S-580), blue(S-585), brown(S-586), green(S-587)

Chemical Name Synonyms: Water/Oil-type Emulsion Ink for Duplicator

H (010)

N.F.P.A.

## SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components Other Limits (Specific Identity; Common Name(s)), CAS No. OSHA(PEL) ACGIH(TWA) Recommended % Petroleum Solvent, CAS No. 64742-55-8, 64742-56-9  $5 \text{ mg/m}^3$ 5 mg/m<sup>3</sup> Not applicable ca. 15%  $10 \text{ mg/m}^3$ Glycerol, CAS No. 56-81-5 15 mg/m<sup>3</sup> Not applicable Carbon black, CAS No. 1333-86-4 3.5mg/m<sup>8</sup>  $3.5 mg/m^3$ Not applicable Non-hazardous components Water, CAS No. 7732-18-5 None Not applicable ca. 60% None Others None None Not applicable

### SECTION II - Physical / Chemical Characteristics

Boiling Point: 212 ° F/ 100° C Specific Gravity(H<sub>2</sub>O = 1): 1.00-1.02

Vapor Pressure(mm Hg): Not determined Melting Point: < 0° C

Vapor Density(A1R = 1): Not applicable Evaporation Rate:
(Butyl Acetate = 1) Not applicable

Solubility in Tater: Negligible

pH Value:

Not applicable

Appearance and Odor: Extremely viscous colored liquid with slight odor

SECTION IV - Fire and Explosion Hazard Data
Flash Point: Flammable Limits: LEL NA UEL NA Not applicable Not applicable
Extinguishing Media: Carbon dioxide, Dry chemical, Foam, Water spray
Special Fire Fighting Procedures: Not in particular. RISOGRAPH INK is not combustible.
Unusual Fire and Explosion Hazards: No unusual fire and explosion hazards.
SECTION V - Reactivity Data
Stability Unstable Conditions to Avoid: Not applicable Stable
Incompatibility(Materials to Avoid) : Strong oxidizing agents
Hazardous Decomposition or Byproducts : None
Hazardous May Occur Conditions to Avoid: Not applicable Polymerization Will Not Occur x
SECTION VI - Health Hazard Data
Route(s) of Entry : Inhalation? Yes Skin? Yes Ingestion? Yes
Health Hazards(Acute and Chronic):  Inhalation : Not expected to be acutely toxic by inhalation.  Skin : Expected to cause no more than minor irritation. Prolonged or frequent skin contact may be harmful.  Eyes : Expected to cause no more than minor irritation.  Skin Absorption : Not information available.  Ingestion : Not expected to be acutely toxic by ingestion.
Carcinogenicity: NTP? No IARC Monographs? Yes OSHA Regulated? No Petroleum solvent known as mineral oil is listed carcinogenic in IARC Monograph.
Signs and Symptoms of Exposure: High vapour concentrations are a little irritating to eyes and the respiratory tract.
Medical conditions Generally Aggravated by Exposure: Not known
Emergency and First Aid Procedure:  Eye Contact: Flush with plenty of water for at least 15 minutes.  Inhalation: Remove affected person to fresh air immediately.

### SECTION VI - Precautions Safe Handling for Storing and

Steps to Be Taken in Case Material Is Released or Spoilled: Spills should be wiped up with cloth or paper.

### Waste Disposal Method:

Incineration is preferable. Observe all Federal, state and local regulations concerning health and environmental pollution.

Precautions to Be Taken in Handling and Storing: Not in particular. In order to keep ink efficiency, store at the temperature 41  $\sim$ 86° F(5  $\sim$ 30° C)

Other Precautions: Not in particular

Protective Gloves: Not normally required

# SECTION WI - Control Measures

Respiratory Protection(Specify Type): Preferable in case of handling a large amount

Ventilation Local Exhaust

: Not required

Special: Not applicable

Eye Protection: Not normally required

Mechanical(General): Preferable

Other: Not applicable

Other Protective Clothing or Equipment: Not in particular

Work/Hygenic Practices : Not applicable