

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME
RISO KAGAKU CORPORATION

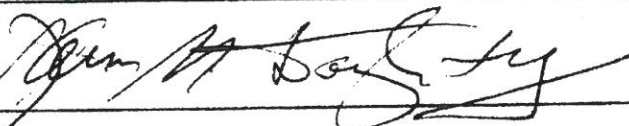
EMERGENCY TELEPHONE NUMBER
508-777-7377

TELEPHONE NUMBER FOR INFORMATION
508-777-7377 RISO, Inc., Danvers, MA

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DATE PREPARED
Dec. 21, 1991

SIGNATURE OF PREPARER



TRADE NAME AND SYNONYMS
RISOGRAPH INK (RG)

CHEMICAL NAME AND SYNONYMS
Water/Oil-type Emulsion Ink for Duplicator

SECTION II - Hazardous Ingredients/Identity Information

ISO KAGAKU CORPORATION considers the formulation of this RG Ink a Trade Secret. Release of the formulation will be made under a non-disclosure agreement.

Hazardous and carcinogenic materials, contained in the RG Ink, as defined by OSHA regulations are described below.

Hazardous Components (Specific Identity; Common Name(s))	CAS No.	Hazard Classification, OSHA(PEL), ACGIH(TWA)	%
Mineral Oil (Ink Oil)	64742-55-8, 64742-56-9	Carcinogenic (IARC)	13%
Glycerol (1,2,3-Propanetriol)	56-81-5	PEL 15 mg/m ³ , TWA 10 mg/m ³ (as total dust)	
Carbon Black (in Oil of Ink)	1333-86-4	PEL 3.5 mg/m ³ , TWA 3.5 mg/m ³	

* The Glycerol is in a water-phase of emulsion and does not disperse in the air.

☆ The Carbon Black is in a paste form and does not disperse in the air.

SECTION III - Physical/Chemical Characteristics

Boiling Point: Not Applicable
Note: The lowest boiling point is water. (212° F/ 100° C)

Specific Gravity (H₂O = 1):
1.00 - 1.02

Vapor Pressure (kg/cm²): ≤ 0.01 (at 40° C) Melting point: Not Applicable

Vapor Density (AIR = 1):
Not Applicable

Evaporation Rate:
(Butyl Acetate = 1) Not Applicable

Solubility: Water: Negligible

Appearance and Odor: Colored extremely viscous liquid with slight odor.

SECTION IV - Fire and Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL	UEL
Not established (JIS K2265 Cleveland Tester)	None	Not Applicable	Not Applicable

Extinguishing Media: CO_2 , Dry chemical form, Water fog or spray

Special Fire Fighting Procedures:
Ink will not act as a source of ignition, but might disperse in a fire.

Unusual Fire and Explosion Hazards: None

SECTION V - Reactive Data

Stability	Unstable _____	Conditions to Avoid: _____
	Stable <u> X </u>	

Incompatibility (Materials to Avoid): Strong oxidizing agents

Hazardous Decomposition or Byproducts: CO on incomplete combustion

Hazardous	May Occur _____	Conditions to Avoid: _____
Polymerization	Will Not Occur <u> X </u>	

SECTION VI - Health Hazard Data

Route(s) of Entry:	Inhalation? yes	Skin? Yes	Ingestion? Yes
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Health Hazards (Acute and Chronic): Mineral oil contained in ink

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
Absorption through skin:	No information available
Ingestion:	Not expected to be acutely toxic by ingestion

Carcinogenicity:	NTP? No	IARC Monographs? Yes	OSHA Regulated? No
Mineral oil (Ink Oil) is listed in IARC Monographs SUPPLEMENT 7(1987).			

Signs and Symptoms of Exposure: Negligible

Medical Conditions Generally Aggravated by Exposure: Refer to Attached NOC MSDS

Emergency and First Aid Procedures:

eye contact:	Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.
skin:	Wash skin thoroughly with soap and water. Launder contaminated clothing.
inhalation:	Not applicable
ingestion:	If swallowed, give a large amount of water to drink, make person vomit, and call a doctor

SECTION VII - Precautions for Safe Handling and Storing

Steps to be taken in case material is released or spilled:
Spills should be wiped up with cloth or paper.

Waste Disposal Method:

Material of ink bottle is Polyvinyl Chloride (PVC). Dispose in accordance with State or Local law.
Controlled burning (small quantities).
Contact local industrial waste disposal company for disposal (large quantities).

Precautions to be taken in handling and storing:

None. Store ink under the bottled condition.
Recommended storage temperature: 41-86 F (5-30 C)

Other Precautions: None

SECTION VIII - Control Measures

Respiratory Protection (Specify Type):

Not necessary

Local Exhaust:	Desirable	Special:	None
Mechanical (General):	Desirable	Other:	None

Protective Gloves: Not normally required. Eye protection: Not normally required.

Other Protective Clothing or Equipment: Not normally required.

Work/Hygenic Practices: None