

MATERIAL SAFETY DATA SHEET

MSDS for Risograph RA Ink

Identity(As Used on Label and List) : Risograph RA Ink (black/red/blue/brown/green/yellow/
Riso-purple/bright-red/medium-blue/federal-blue)

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, MA 01923

Date Prepared : April 14, 1997 Signature of Preparer : *[Signature]*

Trade Name and Synonyms : Risograph RA Ink(Item Code) black(S-569), red(S-574), blue(S-575),
brown(S-576), green(S-577), yellow(S-578), Riso-purple(S-663),
Bright-red(S-664), Medium-blue(S-669), Federal-blue(S-527)

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

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Identity;Common Name(s)), CAS No.	OSHA(PEL)	ACGIH(TWA)	Other Limits Recommended	%
Petroleum Solvent, CAS No. 64742-55-8, 64742-18-3	5 mg/m ³	5 mg/m ³	Not applicable	ca. 15%
Glycerol, CAS No. 56-81-5	15 mg/m ³	10 mg/m ³	Not applicable	
Carbon black, CAS No. 1333-86-4	3.5mg/m ³	3.5mg/m ³	Not applicable	
Aliphatic hydrocarbon, CAS No. 64742-47-8	None	None	(Combustible)	
Non-hazardous components				
Water, CAS No. 7732-18-5	None	None	Not applicable	ca. 60%
Others	None	None	Not applicable	

SECTION III - Physical / Chemical Characteristics

Boiling Point: 212 ° F/ 100° C	Specific Gravity(H ₂ O = 1): 1.00-1.02
Vapor Pressure(mm Hg): Not determined	Melting Point: < 0° C
Vapor Density(AIR = 1): Not applicable	Evaporation Rate: (Butyl Acetate = 1) Not applicable
Solubility in Water: Negligible	pH Value: Not applicable
Appearance and Odor: Extremely viscous black 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 or 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 x

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):

Acute oral toxicity on rats is more than 2000mg/kg.

Skin irritation test on rabbits shows that RA is not irritant.

Eye irritation test on rabbits shows that RA is minimally irritating.

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 VII - Precautions for Safe Handling and Storing

Steps to Be Taken in Case Material Is Released or Spoiled:

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 41~86° F(5 ~30° C)

Other Precautions: Not in particular

SECTION VIII -- Control Measures

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

Ventilation	Local Exhaust	: Not required	Special:	Not applicable
	Mechanical(General):	Preferable	Other:	Not applicable

Protective Gloves:	Not normally required	Eye Protection:	Not normally required
--------------------	-----------------------	-----------------	-----------------------

Other Protective Clothing or Equipment:	Not in particular
---	-------------------

Work/Hygenic Practices	: Not applicable
------------------------	------------------
