RISO

MATERIAL SAFETY DATA SHEET

DATE PREPARED: 97/09/03
MSDS No.: RISO-MG048

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAMES: RISOGRAPH GR INK BLACK
ITEM CODE: S-0539
MANUFACTURER
NAME: RISO KAGAKU CORPORATION
ADDRESS: 5-34-7 SHIBA, MINATO-KU, TOKYO, 108, JAPAN
TELEPHONE NUMBER: (03) 5441 - 6611

DISTRIBUTOR
NAME: (SIGNATURE:)
ADDRESS:
TELEPHONE NUMBER:

Section 2 - COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE / MIXTURE: Mixture (Preparation)
CHEMICAL NATURE: Water-in-Oil-type emulsion
COMPONENTS:

	CAS No.	OSHA PEL	ACGIH TLV	wt%
Petroleum solvent	64742-55-8, 64742-52-5	5 mg/m^3 *1	5 mg/m^3 *1	< 10
Glycerol	56-81-5	15 mg/m^3	10 mg/m^3	< 10
Carbon black	1333-86-4	3.5 mg/m^3	3.5 mg/m^3	< 5

*1 : as mineral oil mists

Section 3 - HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARDS:
PHYSICAL AND CHEMICAL HAZARDS: Not flammable.
ADVERSE HUMAN HEALTH EFFECT: Mildly irritating if brought into contact with eyes and skin.
ENVIRONMENTAL EFFECTS: No information available

Section 4 - FIRST-AID MEASURES

EYE: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
SKIN: After contact with skin, wash immediately with plenty of water.
INHALATION: If you feel unwell, move from the contamination immediately to fresh air, and seek medical advice.
INGESTION: If swallowed, seek medical advice.

Section 5 - FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:
CO_2, dry chemical foam, water fog or spray
SPECIFIC HAZARDS WITH REGARD TO FIRE-FIGHTING MEASURES:
Fire-fighters should wear proper protective equipment.
This ink does not act as a source of ignition, but might burn if involved in a fire.
Toxic gases (mainly carbon monoxide) may form upon combustion.
Move ink-cartridge (bottle) from fire areas if it can be done without risk.

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Section 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Ventilate the area after material picked up is completely.

ENVIRONMENTAL PRECAUTIONS: Do not empty into the drains.

METHOD OF CLEANING UP:

LARGE QUANTITIES: Shovel up, then wipe up with cloth or paper, and hold for waste disposal.

SMALL QUANTITIES: Wipe up with cloth or paper.

Section 7 - HANDLING AND STORAGE

HANDLING:

TECHNICAL MEASURES: Use only in well ventilated areas.

SAFE HANDLING ADVICE: Not in particular. Use only with cartridge (bottle).

STORAGE: In order to keep ink efficient, store at 5 - 30 °C.

PACKAGING MATERIAL: Only original cartridge (bottle).

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES (VENTILATION):

LOCAL EXHAUST: Not normally required

MECHANICAL(GENERAL): Recommended SPECIAL: Not required

CONTROL PARAMETERS: Not available

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION : Not normally required

HAND PROTECTION: Not normally required

EYE PROTECTION: Not normally required

SKIN AND BODY PROTECTION : Not normally required

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

STATE:	Viscous liquid	MELTING POINT:	< 0 °C
BOILING POINT:	> 100 °C	VAPOUR PRESSURE:	2338.1 Pa (20°C) (Water)
DENSITY:	1.015		
WATER SOLUBILITY:	Negligible	FAT SOLUBILITY:	Not available
PARTITION COEFFICIENT:	Not available		
IGNITION TEMPERATURE:	450 - 600 °C (Estimated value)		
FLASH POINT:	Can not established (according to test results of similar inks)		
EXPLOSIVE PROPERTIES:	Not applicable	OXIDISING PROPERTIES:	Not applicable

Section 10 - STABILITY AND REACTIVITY

CONDITION TO AVOID: Water vaporising temperature (roughly 100 °C)

MATERIALS TO AVOID: Strong oxidising agents

HAZARDOUS DECOMPOSITION PRODUCTS:

Toxic gases (carbon monoxide, carbon dioxide and smoke) may form upon combustion.

Section 11 - TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY:	LD50>= 5000mg/kg [rat]
ACUTE EYE IRRITATION:	Minimally and reversible irritating [rabbit]
ACUTE DERMAL IRRITATION:	Mildly and reversible irritating [rabbit]
MUTAGENIC EFFECTS:	Negative in the Ames test
SKIN SENSITISATION:	Non-Sensitisation [Guinea-pig] (Maximization Test)
CARCINOGENIC EFFECTS:	Carbon black listed group 2B (possibly carcinogenic to humans) in IARC Monograph, 65.

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Section 11 - TOXICOLOGICAL INFORMATION

CARCINOGENIC EFFECTS:	No relevant information of petroleum solvent is available in IARC Monograph. Although petroleum solvent is listed in Annex I of Directive 67/548/EEC, it is justified by Nota L not to classify it as carcinogens because it contains less than 3% DMSO extract.
EFFECTS OF OVEREXPOSURE:	Usually vapour is not generated at high concentrations from petroleum solvents in this ink. But vapour or mist in unusually high concentrations from heating this ink, or as from exposure in poorly ventilation, may cause physical discomfort such as headache, dizziness and nausea.

Section 12 - ECOLOGICAL INFORMATION

MOBILITY:	Not available
DEGRADABILITY:	Not available
BIOACCUMULATION:	Not available
ECOTOXICITY:	Not available

Section 13 - DISPOSAL CONSIDERATIONS

METHOD OF DISPOSAL:	Incineration is preferable.
CONTAMINATED PACKAGING:	Material of ink-cartridge (bottle) are polypropylene (PP) and high-density polyethylene (HDPE). Dispose to an authorised waste collection point.

Follow all state and local regulations concerning health and environmental pollution.

Section 14 - TRANSPORT INFORMATION

IMDG CODE:	Not regulated	UN NUMBER:	Not regulated
RID:	Not regulated	ICAO/IATA-DGR:	Not regulated
ADR:	Not regulated	ADNR:	Not regulated

Section 15 - REGULATORY INFORMATION

Follow all regulations in your country.

OSHA Hazard Communication Standard, 29CFR 1910.1200 :

This product is not considered hazardous under this standard.

TSCA (Toxic Substance Control Act) :

All chemical substances in these products are listed in TSCA chemical substance inventory(1994).

IARC (International Agency for Research on Cancer) :

Carbon black is listed in IARC Monograph (refer to Section 11).

No relevant information of petroleum solvent is available.

NTP (National Toxicology Program).

This product contains no chemical substances classed carcinogenicity.

ACGIH (American Conference of Governmental Industrial Hygienists) :

This product contains no chemical substances classed carcinogenicity.

EU regulation and administrative provisions relating to the classification, packaging and labelling of dangerous substances:

Based on available toxicological information, this product has no labelling requirements within the EU.

Petroleum solvent is listed in Annex I of Directive 67/548/EEC (refer to Section 11).

All chemical substances in these products are listed in EINECS (European Inventory of Existing Commercial Chemical Substances).

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Section 16 - OTHER INFORMATION

NFPA RATING (U.S.A.) :

Health = 1 Flammability = 1 Reactivity = 0

The information herein is given in good faith, but no warranty, express or imply, is made. Please consult RISO KAGAKU CORPORATION for further information.