

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

· WRITING INK NAMES	SCAV-B,R,L,G,V,BN,Y,O
· WRITING INSTRUMENT NAMES	· SCA-VSC-M-B,R,L,G,V,BN,Y,O · SCA-VSC-MC-B,R,L,G,V,BN,Y,O · SCAS-VSC-B,R,L,G,V,BN,Y,O
· WRITING INSTRUMENT NAMES	
· NAME OF MANUFACTURER / SUPPLIER	PILOT CORPORATION
· ADDRESS	6-21,KYUBASHI 2-CHOME,CHUO-KU TOKYO, 104-8304 JAPAN
· TELEPHONE NUMBER	03-3538-3700
· FAX NUMBER	03-3538-3901

2. COMPOSITION/INFORMATION ON INGREDIENTS

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SUBSTANCE/MIXTURE Mixture

	Ethanol	1-Methoxy-2-propanol	3-Methoxy-3-methylbutanol	Ethylene glycol monoisopropyl ether
CAS No.	64-17-5	107-98-2	56539-66-3	109-59-1
Weight/%	54.8-59.3	20.0	0-3.0	0-1.0

3. HAZARDS IDENTIFICATION

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· CLASS NAME OF HAZARDOUS CHEMICALS FOR SDS IN JAPAN	FLAMMABLE LIQUID ACUTE TOXIC SUBSTANCES
· PHYSICAL AND CHEMICAL HAZARDS	Flammable liquid.
· ADVERSE HUMAN HEALTH EFFECTS	Irritating to eyes. Irritating to skin. Harmful by inhalation. Harmful by swallowed.
· ENVIRONMENTAL EFFECTS	Not available.

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Follow the local raw and regulations in your country.

4. FIRST-AID MEASURES

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· EYE CONTACT	Gently rinse the affected eyes with clean water for at least 15 minutes. And refer for medical attention.
· SKIN CONTACT	Wash the affected area under tepid running water using a mild soap.
· INHALATION	Remove the victim from the contamination immediately to fresh air. And refer for medical attention.
· INGESTION	Refer for medical attention.

5. FIRE-FIGHTING MEASURES

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· EXTINGUISHING MEDIA	In case of fire,use water spray,foam,dry chemical powder or carbon dioxide.
· SPECIFIC HAZARD WITH REGARD TO FIRE-FIGHTING MEASURES	Apply water from a safe distance to cool and protect surrounding area.

6. ACCIDENTAL RELEASE MEASURES

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Absorb spill with material(e.g.dry sand or earth,cloth),then place in a chemical waste containers.

7. HANDLING & STORAGE

·HANDLING

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- Avoid rough handling or dropping.
- Keep container tightly closed.
- Wear protective safety glasses & gloves.

·STORAGE

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- Inside storage should be in a well-ventilated, noncombustible location, away from all possible source of ignition.
- Follow the local law and regulations in your country.

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- Follow the local law and regulations in your country.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

·CONTROL PARAMETERS

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Ethanol	1000ppm
1-Methoxy-2-propanol	100ppm
3-Methoxy-3-methylbutanol	Not available.
Ethylene glycol monoisopropyl ether	25ppm

·ENGINEERING MEASURES

- WRITING INK Use with local exhaust ventilation.
- WRITING INSTRUMENT Not required.

·PERSONAL PROTECTIVE EQUIPMENT

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- RESPIRATORY PROTECTION Industrial Canister gas masks.
- EYE PROTECTION Safety glasses.
- HAND,SKIN AND BODY PROTECTION Rubber gloves.
- WRITING INSTRUMENT Not required.

9. PHYSICAL & CHEMICAL PROPERTIES

WRITING INK

- PHYSICAL STATE,FORM:
- APPEARLANCE: liquid
- COLOR: Black,Red,Blue,Green,Violet,Brown,Yellow,Orange
- DENSITY: 0.872 - 0.896 (20.0°C)
- FLASH POINT 14°C(Ethanol)
- AUTOIGNITION TEMPERATURE: 392°C(Ethanol)
- UPPER AND LOWER EXPLOSION LIMIT: 19.0(vol.%), 3.3(vol.%(Ethanol)
- BOILING POINT: 78.325°C(Ethanol)
- VAPOR PRESSURE: 44mmHg(20.0°C Ethanol)
- SOLUBILITY IN WATER Insoluble
- SOLUBILITY IN -----:

10. STABILITY & REACTIVITY

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- FLAMMABILITY Flammable
- SPONTANEOUS COMBUSTIBILITY Not available.
- REACTIVITY WITH WATER This material is stable.
- OXIDIZIBILITY This material is stable.
- SELF-REACTIVITY This material is stable.
- STABILITY & REACTIVITY This product is considered a stable material under normal and anticipated storage and handling conditions

11. TOXICOLOGICAL INFORMATION

WRITING INK

·CORROSIVE AND IRRITANT PROPERTIES	1-Methoxy-2-propanol Slight 500mg/hr(rabbit eye) Slight 230mg/hr(rabbit skin)
·ALLERGENIC AND SENSITIZING EFFECTS	Not available.
·ACUTE TOXICITY	Ethanol LDLo 1400mg/kg(human oral) LD ₅₀ 13700mg/kg(rat oral) 1-Methoxy-2-propanol LD ₅₀ 5660mg/kg(rat oral) LD ₅₀ 13000mg/kg(rabbit skin) 3-Methoxy-3-methylbutanol LD ₅₀ 4300mg/kg(rat oral) LD ₅₀ 5830mg/kg(mouse oral) LD ₅₀ >2000mg/kg(rabbit skin) Ethylene glycol monoisopropyl ether LD ₅₀ 5600mg/kg(rat oral) LD ₅₀ 1600mg/kg(rabbit skin)
·SUB-CHRONIC TOXICITY	Not available.
·CHRONIC TOXICITY	Not available.
·CARCINOGENIC EFFECTS	Not available.
·MUTAGENIC EFFECTS	Not available.
·EFFECTS ON THE REPRODUCTIVE SYSTEM	Not available.
·TERATOGENIC EFFECTS	Not available.

12. ECOLOGICAL INFORMATION

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·BIODEGRADABILITY	Not available.
·BIOACCUMULATION	Not available.
·FISH TOXICITY	3-Methoxy-3-methylbutanol TLm 11130ppm/48hrs (ricefish) Ethylene glycol monoisopropyl ether LC ₅₀ >100mg /L(ricefish)

13. DISPOSAL CONSIDERATION

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Follow all regulations in your country.

14. TRANSPORT INFORMATION

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Follow all regulations in your country.

WRITING INK

- UN CLASS: Class 3
- UN No.: 1993

15. REGULATORY INFORMATION

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Follow all regulations in your country.

16. OTHER INFORMATION

·REFERENCES

The information here is given in good faith, but no warranty, express or implied, is made.