

MATERIAL SAFETY DATA SHEET**1. PRODUCT & COMPANY IDENTIFICATION****• PRODUCT NAME**

Artline PERMANENT MARKER

Artline 30 EK-30 , Artline 50 EK-50 Artline 70 EK-70 , Artline 90 EK-90 ,
Artline 100 EK-100 Artline 700 EK-700 (All colors)

- NAME OF MANUFACTURER/SUPPLIER Shachihata Inc.
- NAME OF SECTION Research and Development Dept.
- ADDRESS 4-69,Amatuka-chou,Nishi-ku,Nagoya-shi,Aichi-ken,Japan
- TELEPHONE NUMBER 052/521/1466
- FAX NUMBER 052/521/1468

2. COMPOSITION / INFORMATION ON INGREDIENTS (INK)**•SUBSTANCE / MIXTURE** Mixture**•HAZARDOUS INGREDIENTS**

CHEMICAL OR COMMON NAME(S)	CAS NO.	INGREDIENTS(wt.%)
Ethanol	64-17-5	40~60
Propanoic acid , 2-hydroxy- , ethyl ester	97-64-3	10~30

3. HAZARDS IDENTIFICATION (INK)**•CLASS NAME OF HAZARDS CHEMICALS FOR MSDS IN JAPAN**
Flammable liquids.**• PHYSICAL AND CHEMICAL HAZARDS**
Flammable liquids.**•ADVERSE HUMAN HEALTH HAZARDS**
Harmful by inhalation, in contact with skin.**4. FIRST-AID MEASURES**

- EYE CONTACT ... Immediately flush with plenty of water.
See medical advice immediately.
- SKIN CONTACT ... Wipe off with dry cloth and wash with mild soap.
See medical advice immediately.
- INHALATION ... Move to well ventilated place.
See medical advice immediately.
- INGESTION ... Not applicable.

5. FIRE-FIGHTING MEASURES

- **SPECIFIC HAZARDS WITH REGARD TO FIRE-FIGHTING MEASURES**
In case of fire, use foam dry chemicals.
- **EXTINGUISHING MEDIA**
Dry chemical powder, foam or carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Wipe off with absorbent materials.

7. HANDLING AND STORAGE

- **HANDLING**
 - Use only in the well-ventilated areas.
 - Avoid contact with skin or eyes.
 - Avoid inhalation
 - Avoid high temp. and fire.
- **STORAGE**
 - Store in a cool, dry, well-ventilated location.
 - Keep tightly capped.

8. EXPOSURE CONTROL / PERSONAL PROTECTION• **CONTROL PARAMETERS**

[Ethanol]

ACGIH TLV (1990-91) TWA

1000ppm(1880mg/m³)

OSHA PEL(1993)

1000ppm(1990mg/m³)• **ENGINEERING MEASURES**

Not required.

• **PERSONAL PROTECTIVE EQUIPMENT**

Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES (INK)

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|------------------------------------|---------|------------------------------|
| • APPEARANCE AND ODOR | | Liquid, solvent odor. |
| • DENSITY(g/cm³) | 0.9~1.0 | • BOILING POINT |
| | | No data available |
| • VOLATILE(wt.%) | 60~80 | • SOLUBILITY IN WATER |
| | | Insoluble |

10. PHYSICAL HAZARD(STABILITY AND REACTIVITY) (INK)

- FLASH POINT 15 °C(closed cup)
- AUTOIGNITION TEMPERATURE No data available
- EXPLOSION LIMIT No data available.

11. TOXICOLOGICAL INFORMATION**•ACUTE TOXICITY (RTECS)**

[Ethanol]

Oral	LD ₅₀ (rat)	7,060mg/Kg
Inhalation	LC ₅₀ (rat)	20,000ppm/10H

[Propanoic acid, 2-hydroxy-, ethyl ester]

Oral	LD ₅₀ (mouse)	2,500mg/Kg
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12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATION

Disposal as usual industrial waste goods, follow all regulations in your country.

14. TRANSPORT INFORMATION

Follow all regulations in your country.

15. REGULATORY INFORMATION

Follow all regulations in your country.

16. OTHER INFORMATION

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