

MATERIAL SAFETY DATA SHEET**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name Jiffy ECO-MARKER
 JK-041T,JK-30,JK-70,JK-90,JK-100,EK-120,EK-130,EK-700,EK-250
 (All colors)
 REFILL INK
 ESK-3,JK-20,ESK-60 (All colors)
 General Use Permanent marker
 MSDS Number JA3001A-0101

MANUFACTURER

Company Name Shachihata Co.,Ltd.
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Hazardous Ingredients

Chemical or Common Name(s)	wt. %	Brown, Orange, Yellow	Other colors	CAS(TSCA) Number	EINECS Number
Ethanol		50~60	50~60	64-17-5	200-578-6
1-Propanol		—	1~10	71-23-8	200-746-9
Propanoic acid,2-hydroxy-,ethyl ester		20~30	10~20	97-64-3	202-598-0
Benzenemethanol		1~10	1~10	100-51-6	202-859-9

EU symbol(s) and risk phrase(s) is specified in 15. REGULATORY INFORMATION.

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Flammable liquid with a solvent odor.
 May cause allergic skin reaction.

POTENTIAL HEALTH EFFECT

No data available

POTENTIAL ENVIRONMENTAL EFFECTS

No data available

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4. FIRST AID MEASURES

- INHALATION Move to well ventilated place.
See medical advice immediately.
- EYE Immediately flush with plenty of water.
See medical advice immediately.
- SKIN Wipe off with dry cloth and wash with mild soap.
See medical advice immediately.
- INGESTION See medical advice immediately.
- PROTECTION TO FIRST – AIDERS
No data available
- NOTE TO PHYSICIAN
Treatment may vary with condition of victim and specifics of incident.

5. FIRE FIGHTING MEASURES

- FLAMMABLE PROPERTIES
Highly flammable
- EXTINGUISHING MEDIA
Dry chemical powder, foam or carbon dioxide.
- FIRE FIGHTING INSTRUCTIONS
Wear full fire-fighting turn-out gear and respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

- LAND SPILL Wipe off with dry cloth.
- WATER SPILL Contain spilled liquid with sand or earth.
Do not use combustible materials, such as sawdust.

7. HANDLING AND STORAGE

- HANDLING : Use only in the well-ventilated areas.
Avoid contact with skin or eyes , or clothing.
Avoid inhalation and ingestion.
Avoid high temp. and fire.
Wash thoroughly after handling.
- STORAGE : Store in a cool, dry, well-ventilated location.
Keep away from heat, sunlight.
Keep away from children.

MATERIAL SAFETY DATA SHEET**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

EXPOSURE LIMIT VALUES

OSHA PEL (2002)	[Ethanol]	TWA 1,000 ppm (1,900mg/m ³)
	[1-Propanol]	TWA 200 ppm (500mg/m ³)
ACGIH TLV (2002)	[Ethanol]	TWA 1,000 ppm
	[1-Propanol]	TWA 200 ppm
EN LIMIT (2000/39/EN)		Not established

EXPOSURE CONTROLS

Occupational Exposure Controls

Engineering Controls

Use exhaust ventilation to keep airborne concentration below exposure limits.

Personal Protection

Respiratory Protection

Use with local exhaust ventilation, when in long use.

Hand Protection

Not required, but wear safety gloves, if necessary.

Eye Protection

Not required, but wear safety glasses, if necessary.

Skin Protection

To prevent ANY contact, wear impervious clothing such as gloves, apron, as appropriate.

Environmental Exposure Controls

Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid
Odor	minor solvent odor
Boiling Point / Boiling Range	No data available
Flash Point	16.5 °C
Explosive Properties	No data available
Relative Density (g/cm ³)	0.9~1.0 g/cm ³
Solubility [Water]	Insoluble

MATERIAL SAFETY DATA SHEET**10. STABILITY AND REACTIVITY**

CONDITIONS TO AVOID	No data available
STABILITY	No data available
MATERIALS TO AVOID	No data available
HAZARDOUS REACTIONS / DECOMPOSITION PRODUCTS	No data available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity (RTECS : 2002.3)

[Ethanol]			
	Oral	LD ₅₀ (rat)	7,060 mg/kg
	Inhalation	LC ₅₀ (rat)	20,000 ppm/10H
[1-Propanol]			
	Oral	LD ₅₀ (rat)	1,870 mg/kg
	Inhalation	LCL ₀ (rat)	4,000 ppm/4H
[Propanoic acid,2-hydroxy-,ethyl ester]			
	Oral	LD ₅₀ (rat)	8,200 mg/kg
[Benzenemethanol]			
	Oral	LD ₅₀ (rat)	1,230 mg/kg
	Inhalation	LC ₅₀ (rat)	> 500 mg/m ³
	Skin	LD ₅₀ (rat)	100 pph/90M

12. ECOLOGICAL INFORMATION

ECOTOXICITY	No data available
BIOACCUMULATIVE POTENTIAL	No data available
OTHER ADVERSE EFFECTS	No data available

13. DISPOSAL CONSIDERATIONS

Comply with all federal,state,EU,national and local regulations.

Do not dump this product into sewers , on the ground or into any body of water.**14. TRANSPORT INFORMATION**

UN CLASS	3
UN Packing Group (PG)	II
UN NUMBER	1210
Proper Shipping Name	Printing ink, flammable

MATERIAL SAFETY DATA SHEET**15. REGULATORY INFORMATION**

Refer to any other federal , state , EU , national and local regulations.

OSHA STATUS : This product is hazardous under 29 CFR 1910.1200.

TSCA STATUS : All components on TSCA INVENTORY.

CERCLA REPORTABLE QUANTITY (40 CFR 117,302) :
Not applicable

SARA TITLE III: Not applicable

This product is classified as follows ,

[Ethanol] :	[F]	R:11	S; (2-)7-16
[1-Propanol] :	[F,Xi]	R:11-41-67	S: (2-)7-16-24-26-39
[Propanoic acid,2-hydroxy-,ethyl ester] :			
	[Xi]	R:10-37-41	S: (2-)24-26-39
[Benzenemethanol] :	[Xn]	R:20/22	S: (2-)26

Symbol :	F	(Highly Flammable)
	Xi	(Irritant)
	Xn	(Harmful)
Risk Phrase :	10	(Flammable)
	11	(Highly flammable)
	20/22	(Harmful by inhalation and if swallowed)
	37	(Irritating to respiratory system)
	41	(Risk of serious damage to eyes)
	67	(Vapours may cause drowsiness and dizziness.)
Safety Advice :	2	(Keep out of the reach of children.)
	7	(Keep container tightly closed.)
	16	(Keep away from sources of ignition – No smoking.)
	24	(Avoid contact with skin.)
	26	(In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.)
	39	(Wear eye/face protection.)

Please refer to any other EU, national and local measures.

16. OTHER INFORMATION

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