

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Artline Multipen EMP-1,3
(White)(Black)(Blue)(Red)(Brown)(Yellow)(Yellow Green)
(Pastel Pink)(Pastel Purple)(Pastel Blue)(Pastel Green) (Pastel Orange)
General Use Water based marker
MSDS Number EA5022A-0101

MANUFACTURER
Company Name Shachihata Inc.
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture

Hazardous Ingredients

Chemical or Common Name(s)	wt. %	White				CAS(TSCA) Number	EINECS Number
	Black	Brown	Pastel	Pink	Red,Blue	Others	
Ethanol		1 ~ 10	1 ~ 10	1 ~ 10	1 ~ 10	64-17-5	200-578-6
1,2-Ethanediol	1 ~ 10			1 ~ 10	1 ~ 10	107-21-1	203-473-3
Titanium oxide			20 ~ 30	1 ~ 10	20 ~ 30	13463-67-7	236-675-5

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

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

May cause allergic skin reaction.

POTENTIAL HEALTH EFFECT

No data available

POTENTIAL ENVIRONMENTAL EFFECTS

No data available

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.

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5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point Not applicable

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.
Wash throughly after handling.

STORAGE : Store in a cool, dry, well-ventilated location.
Keep away from heat, sunlight.
Keep away from children.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

OSHA PEL (1994)

[Ethanol] TWA 1,000ppm (1,900mg/m³)

[Titanium oxide] TWA 15 mg/m³ (total dust)

ACGIH TLV (2003)

[Ethanol] TWA 1,000ppm

[1,2-Ethanediol] CL 100 mg/m³ (H)

[Titanium oxide] TWA 10 mg/m³

EN LIMIT (2000/39/EN)

[1,2-Ethanediol]

eight hours 20 ppm (52 mg/m³) (skin)

Short-term 40 ppm (104 mg/m³) (skin)

EXPOSURE CONTROLS

Occupational Exposure Controls

Engineering Controls

Use exhaust ventilation to keep airborne concentration below exposure limits.

Personal Protection

Respiratory Protection

Not required,

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

None

pH

No data available

Boiling Point / Boiling Range

No applicable

Flash Point

No applicable

Explosive Properties

No applicable

Relative Density (g/cm³)

1.0 ~ 1.4 g/cm³

Solubility [Water]

soluble

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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 : 2004-11)

[Ethanol]

Oral	LD ₅₀ (rat)	7,060 mg/kg
Inhalation	LC ₅₀ (rat)	20,000 ppm/10H
Skin	LD ₅₀ (rabbit)	6,300 mg/kg

[1,2-Ethanediol]

Oral	LD ₅₀ (rat)	4,700 mg/kg
Inhalation	LC ₅₀ (rat)	> 200 mg/m ³ /4H
Skin	LD ₅₀ (rabbit)	9,530 uL/kg

[Titanium oxide]

Oral TDLo (rat) 60 mg/kg
 Inhalation TCLo (rat) 50 mg/m³/6H/13W-I

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	None
UN Packing Group (PG)	None
UN NUMBER	None
Proper Shipping Name	None

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15. REGULATORY INFORMATION

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

OSHA STATUS : Not applicable

TSCA STATUS : All components on TSCA INVENTORY.

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

SARA TITLE : Not applicable

This product is classified as follows ,

[Ethanol] :	[F]	R:11	S; (2)-7-16
[1,2-Ethanediol] :	[Xn]	R:22	S; (2)
[Ethanol,2-(2-butoxyethoxy)-]: [Xi]		R:36	S; (2)-24-26
[Ethanol,2,2'-iminobis-] :	[Xn]	R:22-38-41-48/22	S; (2)-26-36/37/39-46

Symbol :	F	(Highly Flammable)
	Xi	(Irritant)
	Xn	{ Harmful)
Risk Phrase :	11	(Highly flammable)
	22	(Harmful if swallowed)
	36	(Irritating to eyes)
	38	(Irritating to skin)
	41	(Risk of serious damage to eyes)
	48/22	(Harmful: danger of serious damage to health by prolonged exposure if swallowed)
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.)
	36/37/39	(Wear suitable protective clothing, gloves and eye/face protection.)
	46	(If swallowed, seek medical advice immediately and show this container or label.)

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

16. OTHER INFORMATION

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