

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

Product Name            Artline POSTER MARKER TEMPERA  
                                       EPP-4, EPP-6 ,EPP-12, EPP-20, EPP-30 (All colors)  
 General Use            Water based marker  
 MSDS Number           EA5001A-0101

**MANUFACTURER**

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

Substance / Mixture	Mixture				CAS(TSCA) Number	EINECS Number
	wt. %					
Chemical or Common Name(s)	Black	White/Grey	Fluo.Color	Other Color		
Ethanol	1 ~ 10	1 ~ 10	1 ~ 10	1 ~ 10	64-17-5	200-578-6
Titanium dioxide	-	30 ~ 40	1 ~ 10	10 ~ 20	13463-67-7	236-675-5
Carbon black	1 ~ 10	-	-	-	1333-86-4	215-609-9

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

**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

May cause allergic skin reaction.

**POTENTIAL HESALTH EFFECT**

No data available

**POTENTIAL ENVIRONMENTAL EFFECTS**

No data available

## MATERIAL SAFETY DATA SHEET

### 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  
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(1,900 mg/m <sup>3</sup> )
	[Carbon black]	TWA 3.5 mg/m <sup>3</sup>
	[Titanium dioxide]	TWA 15 mg/m <sup>3</sup> (total dust)
ACGIH TLV (2002)		
	[Ethanol]	TWA 1,000 ppm
	[Carbon black]	TWA 3.5 mg/m <sup>3</sup>
	[Titanium dioxide]	TWA 10 mg/m <sup>3</sup>
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	None
pH	7 ~ 9
Boiling Point / Boiling Range	No data available
Flash Point	45 ~ 55 (closed cup)
Explosive Properties	No data available
Relative Density (g/cm <sup>3</sup> )	1.1 ~ 1.4 g/cm <sup>3</sup>
Solubility [ Water ]	soluble

**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 <sub>50</sub> (rat)	7,060 mg/kg
Inhalation	LC <sub>50</sub> (rat)	20,000 ppm/10H

[Carbon black]

Oral	LD <sub>50</sub> (rat)	> 15,400 mg/kg
Inhalation	TCL <sub>0</sub> (rat)	50 mg/ m <sup>3</sup> /6H/90D-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	3
UN Packing Group (PG)	
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 : Not applicable

This product is classified as follows ,

[Ethanol] : [F] R:11 S; (2-)7-16

Symbol :	F	( Highly flammable)
Risk Phrase :	11	( Highly flammable)
Safety Advice :	2	( Keep out of the reach of children.)
	7	( Keep container tightly closed.)
	16	( Keep away from sources of ignition – No smoking.)

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

**16. OTHER INFORMATION**

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