

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008
 Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Black)
 EK-30, EK-50, EK-70, EK-90, EK-100, EK-110, EK-120, EK-130, EK-700
 Artline marking INK
 ESK-20, ESK-20-30, ESK-20-60, ESK-3, ESK-20-500



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious eye damage Category 1

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible



LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
 Take precautionary measures against static discharge. (P243)
 Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)
 IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)
 Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists : Get medical advice and attention. (P337+P313)
 Immediately call a POISON CENTER or physician. (P310)
 IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)
 If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	1 ~ 10	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	5 ~ 15	Confidential	none	none
Dyestuff	5 ~ 15	Confidential	none	none
Additive	1 ~ 5	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT

ACGIH (2017)

Ethanol	STEL	1,000 ppm
Propan-1-ol	TWA	100 ppm

OSHA PEL

Ethanol	TWA	1,000 ppm
Propan-1-ol	TWA	200 ppm

DIRECTIVE 2000/39/EC

none

Japan Society for Occupational Health (2017) none

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : black liquid

Odour : minor solvent odour

pH : Not applicable

Boiling point : 78 ~ 205°C

Flash point : 16.5°C (closed cup)

Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)

Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.

Conditions to Avoid : High temperature, Direct sunlight, Fire

Incompatible Materials : Strong oxidising agents

Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION**Acute toxicity** : LD/LC50 values that are relevant for classification

[Ethanol]

Oral-rat LD50 >5,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Propan-1-ol]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >2,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Ethyl lactate]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >5,000 mg/kg

[Benzyl alcohol]

Oral-rat LD50 >300 - <=2,000 mg/kg

Inhalation-rat LC50 >10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage**Carcinogenicity** : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.**SECTION 12 ECOLOGICAL INFORMATION****Hazardous to the aquatic environment (acute)** : Classification not possible**Hazardous to the aquatic environment (chronic)** : Classification not possible**Hazardous to the ozone layer** : Classification not possible**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.**SECTION 14 TRANSPORT INFORMATION****UN number** (DOT, ADR, IMDG, IATA) : UN1210**UN proper shipping name** (DOT, ADR, IMDG, IATA) : PRINTING INK, flammable**UN Classification** : 3**Packing group** (DOT, ADR, IMDG, IATA) : II**Marine pollutant (Y/N)** : N**EmS number** : F-E,S-D

☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

IATA Special Provision A46

IMDG Code Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) (The amount of ink : over 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

UN Classification : 4.1

Packing group : II



SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Propan-1-ol]
Hazard Class & Category	: Flammable liquids, Category 2 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour H318 Causes serious eye damage H336 May cause drowsiness or dizziness
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

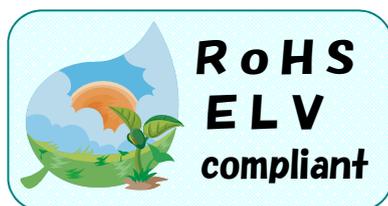
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)
ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008
 Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Red)
 EK-30, EK-50, EK-70, EK-90, EK-100, EK-110, EK-120, EK-130, EK-700
 Artline marking INK
 ESK-20, ESK-20-30, ESK-20-60, ESK-3, ESK-20-500



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
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Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2



Health Hazards

Serious eye damage Category 1

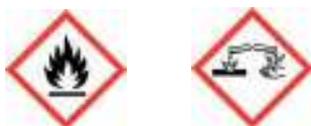
Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible



LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
 Take precautionary measures against static discharge. (P243)
 Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)
 IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)
 Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists : Get medical advice and attention. (P337+P313)
 Immediately call a POISON CENTER or physician. (P310)
 IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)
 If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	5 ~ 15	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	5 ~ 15	Confidential	none	none
Dyestuff	5 ~ 10	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMIT**

ACGIH (2017)

Ethanol	STEL	1,000 ppm
Propan-1-ol	TWA	100 ppm

OSHA PEL

Ethanol	TWA	1,000 ppm
Propan-1-ol	TWA	200 ppm

DIRECTIVE 2000/39/EC

none

Japan Society for Occupational Health (2017) none

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : red liquid
Odour : minor solvent odour
pH : Not applicable
Boiling point : 78 ~ 205°C
Flash point : 16.5°C (closed cup)
Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)
Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.
Conditions to Avoid : High temperature, Direct sunlight, Fire
Incompatible Materials : Strong oxidising agents
Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION**Acute toxicity** : LD/LC50 values that are relevant for classification

[Ethanol]

Oral-rat LD50 >5,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Propan-1-ol]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >2,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Ethyl lactate]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >5,000 mg/kg

[Benzyl alcohol]

Oral-rat LD50 >300 - <=2,000 mg/kg

Inhalation-rat LC50 >10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage**Carcinogenicity** : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.**SECTION 12 ECOLOGICAL INFORMATION****Hazardous to the aquatic environment (acute)** : Classification not possible**Hazardous to the aquatic environment (chronic)** : Classification not possible**Hazardous to the ozone layer** : Classification not possible**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.**SECTION 14 TRANSPORT INFORMATION****UN number** (DOT, ADR, IMDG, IATA) : UN1210**UN proper shipping name** (DOT, ADR, IMDG, IATA) : PRINTING INK, flammable**UN Classification** : 3**Packing group** (DOT, ADR, IMDG, IATA) : II**Marine pollutant (Y/N)** : N**EmS number** : F-E,S-D

☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

IATA Special Provision A46

IMDG Code Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) (The amount of ink : over 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

UN Classification : 4.1

Packing group : II



SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Propan-1-ol]
Hazard Class & Category	: Flammable liquids, Category 2 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour H318 Causes serious eye damage H336 May cause drowsiness or dizziness
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

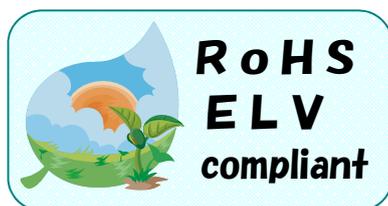
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)
ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008
 Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Blue)
 EK-30, EK-50, EK-70, EK-90, EK-100, EK-110, EK-120, EK-130, EK-700
 Artline marking INK
 ESK-20, ESK-20-30, ESK-20-60, ESK-3, ESK-20-500



Company Name : Shachihata Inc.
Address : 4-69,Amazuka-cho,Nishi-ku,Nagoya City,451-0021,Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2



Health Hazards

Serious eye damage Category 1

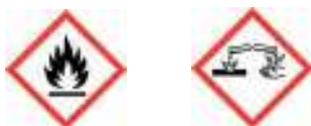
Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible



LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
 Take precautionary measures against static discharge. (P243)
 Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)
 IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)
 Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists : Get medical advice and attention. (P337+P313)
 Immediately call a POISON CENTER or physician. (P310)
 IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)
 If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	5 ~ 15	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	5 ~ 15	Confidential	none	none
Dyestuff	5 ~ 10	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMIT**

ACGIH (2017)

Ethanol	STEL	1,000 ppm
Propan-1-ol	TWA	100 ppm

OSHA PEL

Ethanol	TWA	1,000 ppm
Propan-1-ol	TWA	200 ppm

DIRECTIVE 2000/39/EC none

Japan Society for Occupational Health (2017) none

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : blue liquid
Odour : minor solvent odour
pH : Not applicable
Boiling point : 78 ~ 205°C
Flash point : 16.5°C (closed cup)
Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)
Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.
Conditions to Avoid : High temperature, Direct sunlight, Fire
Incompatible Materials : Strong oxidising agents
Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION**Acute toxicity** : LD/LC50 values that are relevant for classification

[Ethanol]

Oral-rat LD50 >5,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Propan-1-ol]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >2,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Ethyl lactate]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >5,000 mg/kg

[Benzyl alcohol]

Oral-rat LD50 >300 - <=2,000 mg/kg

Inhalation-rat LC50 >10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage**Carcinogenicity** : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.**SECTION 12 ECOLOGICAL INFORMATION****Hazardous to the aquatic environment (acute)** : Classification not possible**Hazardous to the aquatic environment (chronic)** : Classification not possible**Hazardous to the ozone layer** : Classification not possible**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.**SECTION 14 TRANSPORT INFORMATION****UN number** (DOT, ADR, IMDG, IATA) : UN1210**UN proper shipping name** (DOT, ADR, IMDG, IATA) : PRINTING INK, flammable**UN Classification** : 3**Packing group** (DOT, ADR, IMDG, IATA) : II**Marine pollutant (Y/N)** : N**EmS number** : F-E,S-D

☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

IATA Special Provision A46

IMDG Code Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) (The amount of ink : over 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

UN Classification : 4.1

Packing group : II



SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Propan-1-ol]
Hazard Class & Category	: Flammable liquids, Category 2 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour H318 Causes serious eye damage H336 May cause drowsiness or dizziness
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

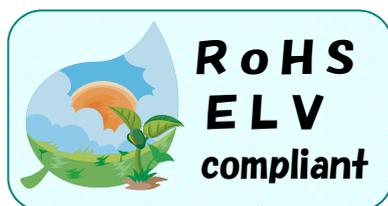
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)
ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008

Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Green)
 EK-30, EK-50, EK-70, EK-90, EK-100, EK-110, EK-120, EK-130, EK-700
 Artline marking INK
 ESK-20, ESK-20-30, ESK-20-60, ESK-3, ESK-20-500



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2



Health Hazards

Serious eye damage Category 1

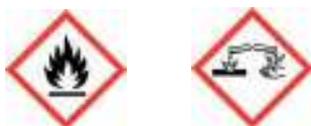
Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible



LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
 Take precautionary measures against static discharge. (P243)
 Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)
 IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)
 Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists : Get medical advice and attention. (P337+P313)
 Immediately call a POISON CENTER or physician. (P310)
 IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)
 If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	45 ~ 55	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	5 ~ 15	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	10 ~ 20	Confidential	none	none
Dyestuff	5 ~ 10	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMIT**

ACGIH (2017)

Ethanol	STEL	1,000 ppm
Propan-1-ol	TWA	100 ppm

OSHA PEL

Ethanol	TWA	1,000 ppm
Propan-1-ol	TWA	200 ppm

DIRECTIVE 2000/39/EC none

Japan Society for Occupational Health (2017) none

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : green liquid
Odour : minor solvent odour
pH : Not applicable
Boiling point : 78 ~ 205°C
Flash point : 16.5°C (closed cup)
Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)
Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.
Conditions to Avoid : High temperature, Direct sunlight, Fire
Incompatible Materials : Strong oxidising agents
Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION**Acute toxicity** : LD/LC50 values that are relevant for classification

[Ethanol]

Oral-rat LD50 >5,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Propan-1-ol]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >2,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Ethyl lactate]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >5,000 mg/kg

[Benzyl alcohol]

Oral-rat LD50 >300 - <=2,000 mg/kg

Inhalation-rat LC50 >10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage**Carcinogenicity** : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.**SECTION 12 ECOLOGICAL INFORMATION****Hazardous to the aquatic environment (acute)** : Classification not possible**Hazardous to the aquatic environment (chronic)** : Classification not possible**Hazardous to the ozone layer** : Classification not possible**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.**SECTION 14 TRANSPORT INFORMATION****UN number** (DOT, ADR, IMDG, IATA) : UN1210**UN proper shipping name** (DOT, ADR, IMDG, IATA) : PRINTING INK, flammable**UN Classification** : 3**Packing group** (DOT, ADR, IMDG, IATA) : II**Marine pollutant (Y/N)** : N**EmS number** : F-E,S-D

☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

IATA Special Provision A46

IMDG Code Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50,EK-100,EK-110,EK-120,EK-130) (The amount of ink : over 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

UN Classification : 4.1

Packing group : II



SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Propan-1-ol]
Hazard Class & Category	: Flammable liquids, Category 2 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour H318 Causes serious eye damage H336 May cause drowsiness or dizziness
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

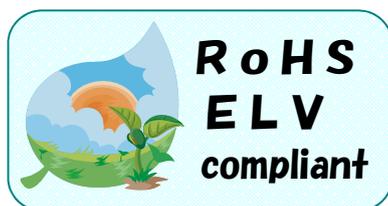
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)
ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008
 Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Brown)
 EK-30, EK-50, EK-70, EK-90, EK-700
 Artline marking INK
 ESK-20, ESK-20-30, ESK-20-60



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious eye damage Category 1
 Specific target organ toxicity ; single exposure Category 3 (respiratory tract irritation)

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible

LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)
 May cause respiratory irritation (H335)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
 Take precautionary measures against static discharge. (P243)
 Avoid breathing vapours. (P261)
 Use only outdoors or in a well-ventilated area. (P271)
 Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)
 IF INHALED : Remove person to fresh air and keep comfortable for breathing. (P304+P340)
 IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists : Get medical advice and attention.

(P337+P313)

Immediately call a POISON CENTER or physician.

(P310)

IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water.

(P303+P361+P353)

If skin irritation occurs : Get medical advice and attention.

(P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Ethyl lactate	20 ~ 30	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	10 ~ 15	Confidential	none	none
Dyestuff	1 ~ 10	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT

ACGIH (2017)			
Ethanol	STEL	1,000 ppm	
OSHA PEL			
Ethanol	TWA	1,000 ppm	
DIRECTIVE 2000/39/EC	none		
Japan Society for Occupational Health (2017)	none		

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : brown liquid

Odour : minor solvent odour

pH : Not applicable

Boiling point : 78 ~ 205°C

Flash point : 16.5°C (closed cup)

Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)

Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.

Conditions to Avoid : High temperature, Direct sunlight, Fire

Incompatible Materials : Strong oxidising agents

Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 >5,000 mg/kg
	Inhalation-rat LC50 >20 mg/L/4h
	[Ethyl lactate]
	Oral-rat LD50 >2,000 mg/kg
	Dermal-rabbit LD50 >5,000 mg/kg
	[Benzyl alcohol]
	Oral-rat LD50 >300 - <=2,000 mg/kg
	Inhalation-rat LC50 >10 - <=20 mg/L/4h
Serious eye damage	: Category 1 Causes serious eye damage
Specific target organ toxicity (single exposure)	: Category 3 May cause respiratory irritation
Carcinogenicity	: This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.

SECTION 12 ECOLOGICAL INFORMATION

Hazardous to the aquatic environment (acute)	: Classification not possible
Hazardous to the aquatic environment (chronic)	: Classification not possible
Hazardous to the ozone layer	: Classification not possible

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal must be made according to official regulations.
 Comply with all Federal, State, and Local regulations regarding disposal.
Do not allow product to reach ground, any water course or sewage system.

SECTION 14 TRANSPORT INFORMATION

UN number	(DOT, ADR, IMDG, IATA) : UN1210
UN proper shipping name	(DOT, ADR, IMDG, IATA) : PRINTING INK, flammable
UN Classification	: 3
Packing group	(DOT, ADR, IMDG, IATA) : II
Marine pollutant (Y/N)	: N
EmS number	: F-E,S-D



☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number	: UN3175
UN proper shipping name	: Solids containing Flammable Liquid. n.o.s.
IATA	Special Provision A46
IMDG Code	Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50) (The amount of ink : over 10ml)

UN number	: UN3175
UN proper shipping name	: Solids containing Flammable Liquid. n.o.s.
UN Classification	: 4.1
Packing group	: II

SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

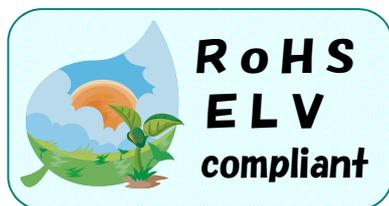
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)

ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008

Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Orange)

EK-30, EK-50, EK-70, EK-90, EK-700

Artline marking INK

ESK-20, ESK-20-30, ESK-20-60



Company Name : Shachihata Inc.

Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan

Telephone : + 81- 52- 521- 3600

Fax : + 81- 52- 521- 3899

Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp

Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])

Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious eye damage Category 1

Specific target organ toxicity ; single exposure Category 3 (respiratory tract irritation)

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible

Hazardous to the aquatic environment (chronic) Classification not possible

Hazardous to the ozone layer Classification not possible

LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour

(H225)

Causes serious eye damage

(H318)

May cause respiratory irritation

(H335)

Precautionary statement

【Prevention】

Keep out of reach of children.

(P102)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(P210)

Take precautionary measures against static discharge.

(P243)

Avoid breathing vapours.

(P261)

Use only outdoors or in a well-ventilated area.

(P271)

Wear eye protection.

(P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish.

(P370+P378)

IF INHALED : Remove person to fresh air and keep comfortable for breathing.

(P304+P340)

IF IN EYES : Rinse cautiously with water for several minutes.

(P305+P351+P338)

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists : Get medical advice and attention.

(P337+P313)

Immediately call a POISON CENTER or physician.

(P310)

IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water.

(P303+P361+P353)

If skin irritation occurs : Get medical advice and attention.

(P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Ethyl lactate	20 ~ 30	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	10 ~ 15	Confidential	none	none
Dyestuff	1 ~ 10	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINGUISHMENT METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT

ACGIH (2017)			
Ethanol	STEL		1,000 ppm
OSHA PEL			
Ethanol	TWA		1,000 ppm
DIRECTIVE 2000/39/EC		none	
Japan Society for Occupational Health (2017)		none	

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : orange liquid

Odour : minor solvent odour

pH : Not applicable

Boiling point : 78 ~ 205°C

Flash point : 16.5°C (closed cup)

Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)

Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.

Conditions to Avoid : High temperature, Direct sunlight, Fire

Incompatible Materials : Strong oxidising agents

Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 >5,000 mg/kg
	Inhalation-rat LC50 >20 mg/L/4h
	[Ethyl lactate]
	Oral-rat LD50 >2,000 mg/kg
	Dermal-rabbit LD50 >5,000 mg/kg
	[Benzyl alcohol]
	Oral-rat LD50 >300 - <=2,000 mg/kg
	Inhalation-rat LC50 >10 - <=20 mg/L/4h
Serious eye damage	: Category 1 Causes serious eye damage
Specific target organ toxicity (single exposure)	: Category 3 May cause respiratory irritation
Carcinogenicity	: This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.

SECTION 12 ECOLOGICAL INFORMATION

Hazardous to the aquatic environment (acute)	: Classification not possible
Hazardous to the aquatic environment (chronic)	: Classification not possible
Hazardous to the ozone layer	: Classification not possible

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal must be made according to official regulations.
 Comply with all Federal, State, and Local regulations regarding disposal.
Do not allow product to reach ground, any water course or sewage system.

SECTION 14 TRANSPORT INFORMATION

UN number	(DOT, ADR, IMDG, IATA) : UN1210
UN proper shipping name	(DOT, ADR, IMDG, IATA) : PRINTING INK, flammable
UN Classification	: 3
Packing group	(DOT, ADR, IMDG, IATA) : II
Marine pollutant (Y/N)	: N
EmS number	: F-E,S-D



☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number	: UN3175
UN proper shipping name	: Solids containing Flammable Liquid. n.o.s.
IATA	Special Provision A46
IMDG Code	Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50) (The amount of ink : over 10ml)

UN number	: UN3175
UN proper shipping name	: Solids containing Flammable Liquid. n.o.s.
UN Classification	: 4.1
Packing group	: II

SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

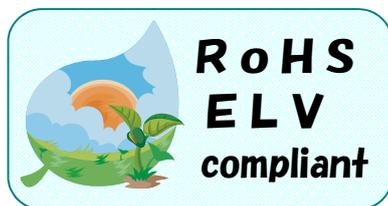
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)

ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008

Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Yellow)
 EK-30, EK-50, EK-70, EK-90, EK-700
 Artline marking INK
 ESK-20



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious eye damage Category 1
 Specific target organ toxicity ; single exposure Category 3 (respiratory tract irritation)

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible

LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)
 May cause respiratory irritation (H335)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
 Take precautionary measures against static discharge. (P243)
 Avoid breathing vapours. (P261)
 Use only outdoors or in a well-ventilated area. (P271)
 Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)
 IF INHALED : Remove person to fresh air and keep comfortable for breathing. (P304+P340)
 IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists : Get medical advice and attention.

(P337+P313)

Immediately call a POISON CENTER or physician.

(P310)

IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water.

(P303+P361+P353)

If skin irritation occurs : Get medical advice and attention.

(P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Ethyl lactate	20 ~ 30	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	10 ~ 15	Confidential	none	none
Dyestuff	1 ~ 10	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINGUISHMENT METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

- Handling** : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

- Storage** : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT

ACGIH (2017)			
Ethanol	STEL	1,000 ppm	
OSHA PEL			
Ethanol	TWA	1,000 ppm	
DIRECTIVE 2000/39/EC	none		
Japan Society for Occupational Health (2017)	none		

PERSONAL PROTECTION

- Respiratory Protection** : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.
- Hand Protection** : Avoid contact with hands. Wear safety gloves, if necessary.
- Eye Protection** : Avoid contact with eyes. Wear safety glasses, if necessary.
- Skin Protection** : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : yellow liquid
- Odour** : minor solvent odour
- pH** : Not applicable
- Boiling point** : 78 ~ 205°C
- Flash point** : 16.5°C (closed cup)
- Relative Density (at 25°C)** : 0.85 ~ 0.95 (g/cm³)
- Solubility in Water** : Insoluble

SECTION 10 STABILITY AND REACTIVITY

- Stability** : Stable under normal handling.
- Conditions to Avoid** : High temperature, Direct sunlight, Fire
- Incompatible Materials** : Strong oxidising agents
- Hazardous Decomposition Products** : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 >5,000 mg/kg
	Inhalation-rat LC50 >20 mg/L/4h
	[Ethyl lactate]
	Oral-rat LD50 >2,000 mg/kg
	Dermal-rabbit LD50 >5,000 mg/kg
	[Benzyl alcohol]
	Oral-rat LD50 >300 - <=2,000 mg/kg
	Inhalation-rat LC50 >10 - <=20 mg/L/4h
Serious eye damage	: Category 1 Causes serious eye damage
Specific target organ toxicity (single exposure)	: Category 3 May cause respiratory irritation
Carcinogenicity	: This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.

SECTION 12 ECOLOGICAL INFORMATION

Hazardous to the aquatic environment (acute)	: Classification not possible
Hazardous to the aquatic environment (chronic)	: Classification not possible
Hazardous to the ozone layer	: Classification not possible

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal must be made according to official regulations.
 Comply with all Federal, State, and Local regulations regarding disposal.
Do not allow product to reach ground, any water course or sewage system.

SECTION 14 TRANSPORT INFORMATION

UN number	(DOT, ADR, IMDG, IATA) : UN1210
UN proper shipping name	(DOT, ADR, IMDG, IATA) : PRINTING INK, flammable
UN Classification	: 3
Packing group	(DOT, ADR, IMDG, IATA) : II
Marine pollutant (Y/N)	: N
EmS number	: F-E,S-D



☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number	: UN3175
UN proper shipping name	: Solids containing Flammable Liquid. n.o.s.
IATA	Special Provision A46
IMDG Code	Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50) (The amount of ink : over 10ml)

UN number	: UN3175
UN proper shipping name	: Solids containing Flammable Liquid. n.o.s.
UN Classification	: 4.1
Packing group	: II

SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

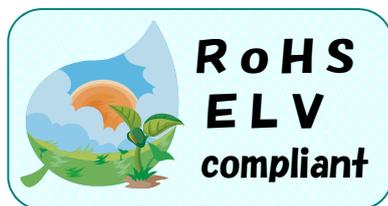
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)

ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008

Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Purple)
 EK-30, EK-50, EK-70, EK-90, EK-700
 Artline marking INK
 ESK-20



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

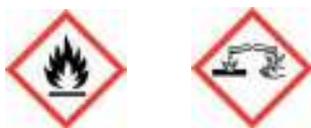
Serious eye damage Category 1

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible

LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Take precautionary measures against static discharge. (P243)

Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)

IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists : Get medical advice and attention. (P337+P313)

Immediately call a POISON CENTER or physician. (P310)

IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)

If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	5 ~ 15	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	10 ~ 15	Confidential	none	none
Dyestuff	1 ~ 10	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMIT**

ACGIH (2017)

Ethanol	STEL	1,000 ppm
Propan-1-ol	TWA	100 ppm

OSHA PEL

Ethanol	TWA	1,000 ppm
Propan-1-ol	TWA	200 ppm

DIRECTIVE 2000/39/EC

none

Japan Society for Occupational Health (2017) none

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : purple liquid
Odour : minor solvent odour
pH : Not applicable
Boiling point : 78 ~ 205°C
Flash point : 16.5°C (closed cup)
Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)
Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.
Conditions to Avoid : High temperature, Direct sunlight, Fire
Incompatible Materials : Strong oxidising agents
Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION**Acute toxicity** : LD/LC50 values that are relevant for classification

[Ethanol]

Oral-rat LD50 >5,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Propan-1-ol]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >2,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Ethyl lactate]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >5,000 mg/kg

[Benzyl alcohol]

Oral-rat LD50 >300 - <=2,000 mg/kg

Inhalation-rat LC50 >10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage**Carcinogenicity** : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.**SECTION 12 ECOLOGICAL INFORMATION****Hazardous to the aquatic environment (acute)** : Classification not possible**Hazardous to the aquatic environment (chronic)** : Classification not possible**Hazardous to the ozone layer** : Classification not possible**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.**SECTION 14 TRANSPORT INFORMATION****UN number** (DOT, ADR, IMDG, IATA) : UN1210**UN proper shipping name** (DOT, ADR, IMDG, IATA) : PRINTING INK, flammable**UN Classification** : 3**Packing group** (DOT, ADR, IMDG, IATA) : II**Marine pollutant (Y/N)** : N**EmS number** : F-E,S-D

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Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

IATA Special Provision A46

IMDG Code Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50) (The amount of ink : over 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

UN Classification : 4.1

Packing group : II



SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Propan-1-ol]
Hazard Class & Category	: Flammable liquids, Category 2 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour H318 Causes serious eye damage H336 May cause drowsiness or dizziness
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)
ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008

Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Pink)
 EK-30, EK-50, EK-70, EK-90, EK-700
 Artline marking INK
 ESK-20



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious eye damage Category 1

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible

LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Take precautionary measures against static discharge. (P243)

Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)

IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists : Get medical advice and attention. (P337+P313)

Immediately call a POISON CENTER or physician. (P310)

IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)

If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 55	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	5 ~ 15	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	15 ~ 20	Confidential	none	none
Dyestuff	1 ~ 5	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMIT**

ACGIH (2017)

Ethanol	STEL	1,000 ppm
Propan-1-ol	TWA	100 ppm

OSHA PEL

Ethanol	TWA	1,000 ppm
Propan-1-ol	TWA	200 ppm

DIRECTIVE 2000/39/EC

none

Japan Society for Occupational Health (2017) none

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : pink liquid
Odour : minor solvent odour
pH : Not applicable
Boiling point : 78 ~ 205°C
Flash point : 16.5°C (closed cup)
Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)
Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.
Conditions to Avoid : High temperature, Direct sunlight, Fire
Incompatible Materials : Strong oxidising agents
Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION**Acute toxicity** : LD/LC50 values that are relevant for classification

[Ethanol]

Oral-rat LD50 >5,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Propan-1-ol]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >2,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Ethyl lactate]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >5,000 mg/kg

[Benzyl alcohol]

Oral-rat LD50 >300 - <=2,000 mg/kg

Inhalation-rat LC50 >10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage**Carcinogenicity** : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.**SECTION 12 ECOLOGICAL INFORMATION****Hazardous to the aquatic environment (acute)** : Classification not possible**Hazardous to the aquatic environment (chronic)** : Classification not possible**Hazardous to the ozone layer** : Classification not possible**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.**SECTION 14 TRANSPORT INFORMATION****UN number** (DOT, ADR, IMDG, IATA) : UN1210**UN proper shipping name** (DOT, ADR, IMDG, IATA) : PRINTING INK, flammable**UN Classification** : 3**Packing group** (DOT, ADR, IMDG, IATA) : II**Marine pollutant (Y/N)** : N**EmS number** : F-E,S-D

☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

IATA Special Provision A46

IMDG Code Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50) (The amount of ink : over 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

UN Classification : 4.1

Packing group : II



SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Propan-1-ol]
Hazard Class & Category	: Flammable liquids, Category 2 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour H318 Causes serious eye damage H336 May cause drowsiness or dizziness
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

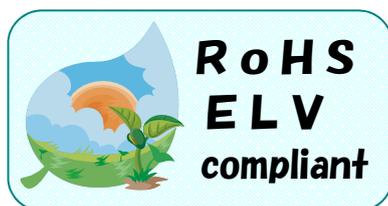
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)
ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008

Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Light blue)
 EK-30, EK-50, EK-70, EK-90, EK-700
 Artline marking INK
 ESK-20



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious eye damage Category 1

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible
 Hazardous to the aquatic environment (chronic) Classification not possible
 Hazardous to the ozone layer Classification not possible

LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
 Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Take precautionary measures against static discharge. (P243)

Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)

IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists : Get medical advice and attention. (P337+P313)

Immediately call a POISON CENTER or physician. (P310)

IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)

If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed.

(P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

(P501)

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	55 ~ 65	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	5 ~ 15	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	5 ~ 15	Confidential	none	none
Dyestuff	1 ~ 5	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA : Dry chemical powder, foam or carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

Handling : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.

Storage : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMIT**

ACGIH (2017)

Ethanol	STEL	1,000 ppm
Propan-1-ol	TWA	100 ppm

OSHA PEL

Ethanol	TWA	1,000 ppm
Propan-1-ol	TWA	200 ppm

DIRECTIVE 2000/39/EC

none

Japan Society for Occupational Health (2017) none

PERSONAL PROTECTION

Respiratory Protection : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.

Hand Protection : Avoid contact with hands. Wear safety gloves, if necessary.

Eye Protection : Avoid contact with eyes. Wear safety glasses, if necessary.

Skin Protection : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance : light blue liquid
Odour : minor solvent odour
pH : Not applicable
Boiling point : 78 ~ 205°C
Flash point : 16.5°C (closed cup)
Relative Density (at 25°C) : 0.85 ~ 0.95 (g/cm³)
Solubility in Water : Insoluble

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal handling.
Conditions to Avoid : High temperature, Direct sunlight, Fire
Incompatible Materials : Strong oxidising agents
Hazardous Decomposition Products : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION**Acute toxicity** : LD/LC50 values that are relevant for classification

[Ethanol]

Oral-rat LD50 >5,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Propan-1-ol]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >2,000 mg/kg

Inhalation-rat LC50 >20 mg/L/4h

[Ethyl lactate]

Oral-rat LD50 >2,000 mg/kg

Dermal-rabbit LD50 >5,000 mg/kg

[Benzyl alcohol]

Oral-rat LD50 >300 - <=2,000 mg/kg

Inhalation-rat LC50 >10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage**Carcinogenicity** : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.**SECTION 12 ECOLOGICAL INFORMATION****Hazardous to the aquatic environment (acute)** : Classification not possible**Hazardous to the aquatic environment (chronic)** : Classification not possible**Hazardous to the ozone layer** : Classification not possible**SECTION 13 DISPOSAL CONSIDERATIONS**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.**SECTION 14 TRANSPORT INFORMATION****UN number** (DOT, ADR, IMDG, IATA) : UN1210**UN proper shipping name** (DOT, ADR, IMDG, IATA) : PRINTING INK, flammable**UN Classification** : 3**Packing group** (DOT, ADR, IMDG, IATA) : II**Marine pollutant (Y/N)** : N**EmS number** : F-E,S-D

☆☆

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) is not a hazardous material by the special provision. However, Artline Permanent Marker (EK-50) is a hazardous material (UN3175) for more than 10ml.

Artline Permanent Marker (EK-30,EK-70,EK-90,EK-700) (The amount of ink : less than 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

IATA Special Provision A46

IMDG Code Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

Artline Permanent Marker (EK-50) (The amount of ink : over 10ml)

UN number : UN3175

UN proper shipping name : Solids containing Flammable Liquid. n.o.s.

UN Classification : 4.1

Packing group : II



SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour
Substance name	: [Propan-1-ol]
Hazard Class & Category	: Flammable liquids, Category 2 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour H318 Causes serious eye damage H336 May cause drowsiness or dizziness
Substance name	: [Ethyl lactate]
Hazard Class & Category	: Flammable liquids, Category 3 Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3
Symbols	: GHS02,GHS07,GHS05
Signal word	: Danger
Hazard statements	: H226 Flammable liquid and vapour H318 Causes serious eye damage H335 May cause respiratory irritation
Substance name	: [Benzyl alcohol]
Hazard Class & Category	: Acute toxicity (inhalation: vapour), Category 4 Acute toxicity (oral), Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H332 Harmful if inhaled H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

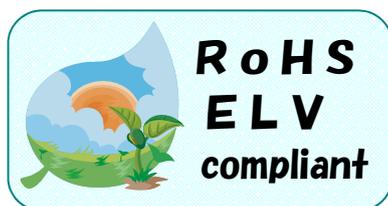
TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

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

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION

EU RoHS Directive(2011/65/EC)
ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.

Safety Data Sheet (MSDS)

Issued Date : May. 5th, 2008

Revised Date : Jan. 11th, 2018

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Permanent Markers Colour : (Yellow green)
EK-700



Company Name : Shachihata Inc.
Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan
Telephone : + 81- 52- 521- 3600
Fax : + 81- 52- 521- 3899
Contact (e-mail) : chem-analysis@ngy.shachihata.co.jp
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Permanent marker ink

SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious eye damage Category 1

Environmental Hazards

Hazardous to the aquatic environment (acute) Classification not possible

Hazardous to the aquatic environment (chronic) Classification not possible

Hazardous to the ozone layer Classification not possible

LABEL ELEMENTS

Symbols



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)
Causes serious eye damage (H318)

Precautionary statement

【Prevention】

Keep out of reach of children. (P102)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Take precautionary measures against static discharge. (P243)

Wear eye protection. (P280)

【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)

IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists : Get medical advice and attention. (P337+P313)

Immediately call a POISON CENTER or physician. (P310)

IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)

If skin irritation occurs : Get medical advice and attention. (P332+P313)

【Storage】

Store in a well-ventilated place. Keep container tightly closed. (P403+P233)

【Disposal】

Dispose of contents and container in accordance with local regulations.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**Substance / Mixture** : Mixture**Ingredients** :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Ethanol	50 ~ 60	64-17-5	Flam. Liq. 2	H225
Propan-1-ol	5 ~ 15	71-23-8	Flam. Liq. 2 Eye Dam. 1 STOT. SE. 3	H225 H318 H336
Ethyl lactate	10 ~ 20	97-64-3	Flam. Liq. 3 Eye Dam. 1 STOT. SE. 3	H226 H318 H335
Benzyl alcohol	1 ~ 5	100-51-6	Acute Tox.(oral) 4 Acute Tox.(inhal.) 4 Eye Irrit. 2A	H302 H332 H319
Synthetic resin	10 ~ 20	Confidential	none	none
Dyestuff	1 ~ 5	Confidential	none	none
total	100			

SECTION 4 FIRST-AID MEASURES

- IF INHALED** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Consult a doctor if symptoms persist.
- IF ON SKIN** : Remove / Take off immediately all contaminated clothing. Wash with soap and water. If skin irritation/rash occurs or feel unwell, consult a doctor for medical advice.
- IF IN EYES** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
- IF SWALLOWED** : After rinse mouth immediately, give about 250 ml of water or milk and thin in the stomach, and do not vomit forcibly. Moreover, do not give anything from the mouth to the patient when not conscious. Receive the doctor's treatment (stomach pump) promptly.

SECTION 5 FIRE-FIGHTING MEASURES**SUITABLE EXTINGUISHING MEDIA** : Dry chemical powder, foam or carbon dioxide**UNSUITABLE EXTINGUISHING MEDIA** : Water jet**SPECIFIC EXTINCTION METHOD**

For initial stage extinction, carbon dioxide or dry chemical powder.

When a fire extends, fire is extinguished by a large amount of water spray.

Do not discharge extinguishing waters into the aquatic environment.

SPECIAL PROTECTIVE FOR FIRE- FIGHTERS

In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.

Because during a fire, hazardous gases may be generated, fire-fighters have to wear self-contained breathing apparatus and other protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

Evacuate personnel to safe area. Shut off all sources of ignition.

No Flares, smoking or flame in area. Put on protective equipment. Ensure adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not throw the leakage thing directly into environment

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

SECONDARY ACCIDENT PREVENTION MEASURE

All ignition sources should be quickly removed. (No smoking in vicinity, prohibit sparks or fire sources.)

SECTION 7 HANDLING AND STORAGE

- Handling** : Use with adequate ventilation.
 Avoid contact with skin, eyes and clothing.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product.
- Storage** : Keep containers tightly closed and store in a cool and dry place.
 Keep away from heat and flame, ignition source and sunlight.
 Keep out of the reach of children.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT

ACGIH (2017)			
Ethanol	STEL		1,000 ppm
Propan-1-ol	TWA		100 ppm
OSHA PEL			
Ethanol	TWA		1,000 ppm
Propan-1-ol	TWA		200 ppm
DIRECTIVE 2000/39/EC		none	
Japan Society for Occupational Health (2017)		none	

PERSONAL PROTECTION

- Respiratory Protection** : Use with local exhaust ventilation, when in long use.
 Avoid breathing vapours. Wear mask to prevent organic gas, if necessary.
- Hand Protection** : Avoid contact with hands. Wear safety gloves, if necessary.
- Eye Protection** : Avoid contact with eyes. Wear safety glasses, if necessary.
- Skin Protection** : Avoid skin contact. Wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : yellow green liquid
- Odour** : minor solvent odour
- pH** : Not applicable
- Boiling point** : 78 ~ 205°C
- Flash point** : 16.5°C (closed cup)
- Relative Density (at 25°C)** : 0.85 ~ 0.95 (g/cm³)
- Solubility in Water** : Insoluble

SECTION 10 STABILITY AND REACTIVITY

- Stability** : Stable under normal handling.
- Conditions to Avoid** : High temperature, Direct sunlight, Fire
- Incompatible Materials** : Strong oxidising agents
- Hazardous Decomposition Products** : CO, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION

- Acute toxicity** : LD/LC50 values that are relevant for classification
 [Ethanol]
 Oral-rat LD50 >5,000 mg/kg

Inhalation-rat	LC50	>20 mg/L/4h
[Propan-1-ol]		
Oral-rat	LD50	>2,000 mg/kg
Dermal-rabbit	LD50	>2,000 mg/kg
Inhalation-rat	LC50	>20 mg/L/4h
[Ethyl lactate]		
Oral-rat	LD50	>2,000 mg/kg
Dermal-rabbit	LD50	>5,000 mg/kg
[Benzyl alcohol]		
Oral-rat	LD50	>300 - <=2,000 mg/kg
Inhalation-rat	LC50	>10 - <=20 mg/L/4h

Serious eye damage : Category 1 Causes serious eye damage

Carcinogenicity : This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or NTP.

SECTION 12 ECOLOGICAL INFORMATION

Hazardous to the aquatic environment (acute) : Classification not possible

Hazardous to the aquatic environment (chronic) : Classification not possible

Hazardous to the ozone layer : Classification not possible

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

Do not allow product to reach ground, any water course or sewage system.

SECTION 14 TRANSPORT INFORMATION

UN number	(DOT, ADR, IMDG, IATA)	: UN1210
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: PRINTING INK, flammable
UN Classification		: 3
Packing group	(DOT, ADR, IMDG, IATA)	: II
Marine pollutant (Y/N)		: N
EmS number		: F-E,S-D



☆☆

Artline Permanent Marker (EK-700) is not a hazardous material by the special provision.

Artline Permanent Marker (EK-700) (The amount of ink : less than 10ml)

UN number	: UN3175
UN proper shipping name	: Solids containing Flammable Liquid. n.o.s.
IATA	Special Provision A46
IMDG Code	Special Provision 216

According to IATA Special Provision A46, and IMDG Code Special Provision 216, small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to as a hazardous material/dangerous goods provided there is no free liquid in the packet or article.

SECTION 15 REGULATORY INFORMATION

< EU Information >

Regulation (EC) No 1272/2008 (CLP)

Substance name	: [Ethanol]
Hazard Class & Category	: Flammable liquids, Category 2
Symbols	: GHS02
Signal word	: Danger
Hazard statements	: H225 Highly flammable liquid and vapour

Substance name : [Propan-1-ol]
 Hazard Class & Category : Flammable liquids, Category 2
 Serious eye damage, Category 1
 Specific target organ toxicity - single exposure, Category 3
 Symbols : GHS02,GHS07,GHS05
 Signal word : Danger
 Hazard statements : H225 Highly flammable liquid and vapour
 H318 Causes serious eye damage
 H336 May cause drowsiness or dizziness

Substance name : [Ethyl lactate]
 Hazard Class & Category : Flammable liquids, Category 3
 Serious eye damage, Category 1
 Specific target organ toxicity - single exposure, Category 3
 Symbols : GHS02,GHS07,GHS05
 Signal word : Danger
 Hazard statements : H226 Flammable liquid and vapour
 H318 Causes serious eye damage
 H335 May cause respiratory irritation

Substance name : [Benzyl alcohol]
 Hazard Class & Category : Acute toxicity (inhalation: vapour), Category 4
 Acute toxicity (oral), Category 4
 Symbols : GHS07
 Signal word : Warning
 Hazard statements : H332 Harmful if inhaled
 H302 Harmful if swallowed

< USA Information >

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

TSCA STATUS : All components on TSCA INVENTORY.

TSCA Hazard Communication Program (40 CFR Part 721) (SNUR) : Not Applicable

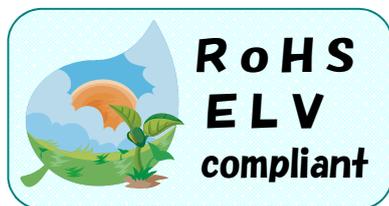
CERCLA REPORTABLE QUANTITY (40 CFR 117,302) : Not Applicable

SARA TITLE III Section 313 (40 CFR 372) : Not Applicable

California Proposition 65 (Chemicals known to cause cancer) : Not listed

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

SECTION 16 OTHER INFORMATION



EU RoHS Directive(2011/65/EC)
 ELV Directive(2000/53/EC)

This data sheet may not be enough when evaluating danger or hazard. The above information, which is created from currently available documents, information and data, may be revised when new findings announced. This document has been written on the assumption that when dealing with a large amount of ink on the business case and emergency. When handling as a normal product, please refer to the notes that is described in the produce or packaging. The information contained herein is not intended to provide any kind of warranty other than information, there is no guarantee for the accuracy of the content.