

Safety Data Sheet (MSDS)

Issued Date : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Black)
EPG-4

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



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification
Physical Hazards : Not classified
Health Hazards : Not classified
Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none
Signal word : none
Hazard statement : none

Precautionary statement

【Prevention】
Wash hands thoroughly after handling. (P264)

【Response】
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/attention. (P337+P313)
IF ON SKIN (or hair) : Remove/Take off immediately all contaminated clothing. (P303+P361+P353)
Rinse skin with water/shower.
If skin irritation occurs : Get medical advice/attention. (P332+P313)
IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
Dispose of contents/container to waste in accordance with (P501)
local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	55~65	7732-18-5	none	none
Ethanol	1~10	64-17-5	Flam.Liq. 2	H225
Propan-2-ol	1~5	67-63-0	Flam.Liq. 2 Eye Irrit. 2A STOT.SE. 3	H225 H319 H336
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	1~5	Confidential	none	none
Carbon black	5~15	1333-86-4	none	none
Others	5~15	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Propan-2-ol	TWA	200ppm
Carbon black	TWA	3 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Propan-2-ol	TWA	400ppm
Carbon black	TWA	3.5 mg/m ³

DIRECTIVE 2000/39/EC

none

Japan Society for Occupational Health (2013)

Propan-2-ol	TWA	400ppm
Carbon black	Dusts Class 2 OEL(Total dust)	4 mg/m ³

PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: black liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.0 - 1.1 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification		
	[Ethanol]		
	Oral-rat	LD50	7,060mg/kg
	Inhalation-rat	LC50	20,000ppm/10h
	[Propan-2-ol]		
	Oral-rat	LD50	>5,000mg/kg
	Dermal-rabbit	LD50	>5,000mg/kg

Carcinogenicity : Carbon black has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of carbon black, the International Agency for Research on Cancer (IARC) has classified as a group 2B.
However, as the ink product we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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) : None

UN proper shipping name (DOT, ADR, IMDG, IATA) : None

UN Classification : None

Packing group (DOT, ADR, IMDG, IATA) : None

Marine pollutant (Y/N) : N

EmS number : None

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-2-ol]
 Hazard Class & Category : Flammable liquids, Category 2
 Eye irritation, Category 2
 Specific target organ toxicity - single exposure, Category 3
 Symbols : GHS02, GHS07
 Signal word : Danger
 Hazard statements : H225 Highly flammable liquid and vapour
 H319 Causes serious eye irritation
 H336 May cause drowsiness or dizziness

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name : [Ethanol]
 Classification : F; R11
 R-Phrase : R11 Highly flammable.
 S-Phrase : S2 Keep out of the reach of children.
 S7 Keep container tightly closed.
 S16 Keep away from sources of ignition - No smoking.
 Symbols and indications of danger specific F : Highly flammable

Hazard designation

Substance name : [Propan-2-ol]
 Classification : F; R11 - Xi; R36 - R67
 R-Phrase : R11 Highly flammable.
 R36 Irritating to eyes.
 R67 Vapours may cause drowsiness and dizziness.
 S-Phrase : S2 Keep out of the reach of children.
 S7 Keep container tightly closed.
 S16 Keep away from sources of ignition - No smoking.
 S24/25 Avoid contact with skin and eyes.
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 Symbols and indications of danger specific F : Highly flammable Xi : Irritant

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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)	: listed [carbon black]

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

SECTION 16 OTHER INFORMATION



EU RoHS Directive(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (White)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	1~5	Confidential	none	none
Titanium oxide	25~35	13463-67-7	none	none
Others	5~15	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas,if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron,boots,if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: white liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.2 - 1.4 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification [Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency),EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done.Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F; R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
 This product does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Purple)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



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Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
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Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	1~5	Confidential	none	none
Titanium oxide	25~35	13463-67-7	none	none
Pigment	1~5	Confidential	none	none
Others	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.

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

UNSUITABLE EXTINGUISHING MEDIA : Water jet

SPECIFIC EXTINCTION METHOD

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

Do not discharge extinguishing waters into the aquatic environment.

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

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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.

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In case of a small spill, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: purple liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.2 - 1.4 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	:	[Ethanol]
Classification	:	F+ R11
R-Phrase	:	R11 Highly flammable.
S-Phrase	:	S2 Keep out of the reach of children.
		S7 Keep container tightly closed.
		S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Light Blue)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible



LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	1~5	Confidential	none	none
Titanium oxide	25~35	13463-67-7	none	none
Pigment	1~5	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: light blue liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.2 - 1.4 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.Yellow)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.
 In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro.yellow liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification [Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	:	[Ethanol]
Classification	:	F+ R11
R-Phrase	:	R11 Highly flammable.
S-Phrase	:	S2 Keep out of the reach of children.
		S7 Keep container tightly closed.
		S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.green)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)			
Ethanol	STEL		1000ppm
Titanium dioxide	TWA		10 mg/m ³
OSHA PEL			
Ethanol	TWA		1000ppm
Titanium dioxide	TWA		15 mg/m ³
DIRECTIVE 2000/39/EC			Not listed
Japan Society for Occupational Health (2013)			
Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³

PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro.green liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.orange)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】

Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

IF ON SKIN (or hair) : Remove/Take off immediately all contaminated clothing. (P303+P361+P353)

Rinse skin with water/shower.

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

【Storage】

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

【Disposal】

Dispose of contents/container to waste in accordance with (P501)

local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro. orange liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	:	[Ethanol]
Classification	:	F+ R11
R-Phrase	:	R11 Highly flammable.
S-Phrase	:	S2 Keep out of the reach of children.
		S7 Keep container tightly closed.
		S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.pink)
 EPG-4
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
Emergency Call : + 81- 52- 521- 3600 (Shachihata Inc. [Japan])
Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification
Physical Hazards : Not classified
Health Hazards : Not classified
Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none
Signal word : none
Hazard statement : none

Precautionary statement

【Prevention】

Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

IF ON SKIN (or hair) : Remove/Take off immediately all contaminated clothing. (P303+P361+P353)

Rinse skin with water/shower.

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

【Storage】

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

【Disposal】

Dispose of contents/container to waste in accordance with (P501)

local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.
 In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro.pink liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
 This product does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.green)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro.green liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.orange)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】

Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

IF ON SKIN (or hair) : Remove/Take off immediately all contaminated clothing. (P303+P361+P353)

Rinse skin with water/shower.

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

【Storage】

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

【Disposal】

Dispose of contents/container to waste in accordance with (P501)

local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro. orange liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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) : None
 UN proper shipping name (DOT, ADR, IMDG, IATA) : None
 UN Classification : None
 Packing group (DOT, ADR, IMDG, IATA) : None
 Marine pollutant (Y/N) : N
 EmS number : None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name : [Ethanol]
 Classification : F+ R11
 R-Phrase : R11 Highly flammable.
 S-Phrase : S2 Keep out of the reach of children.
 S7 Keep container tightly closed.
 S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
 This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.pink)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro.pink liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Fluoro.Yellow)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	10~20	Confidential	none	none
Titanium oxide	15~25	13463-67-7	none	none
Dyestuff	<1	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fluoro.yellow liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.1 - 1.3 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
 This product does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Light Blue)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	1~5	Confidential	none	none
Titanium oxide	25~35	13463-67-7	none	none
Pigment	1~5	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: light blue liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.2 - 1.4 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification [Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (Purple)
EPG-4

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



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification
Physical Hazards : Not classified
Health Hazards : Not classified
Environmental Hazards : Classification not possible



LABEL ELEMENTS

Symbols : none
Signal word : none
Hazard statement : none

Precautionary statement

【Prevention】
Wash hands thoroughly after handling. (P264)

【Response】
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/attention. (P337+P313)
IF ON SKIN (or hair) : Remove/Take off immediately all contaminated clothing. (P303+P361+P353)
Rinse skin with water/shower.
If skin irritation occurs : Get medical advice/attention. (P332+P313)
IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
Dispose of contents/container to waste in accordance with (P501)
local/regional/ national/international regulation (to be specified).

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture
Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	1~5	Confidential	none	none
Titanium oxide	25~35	13463-67-7	none	none
Pigment	1~5	Confidential	none	none
Others	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas, if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron, boots, if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: purple liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.2 - 1.4 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification
	[Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F+ R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
 This product does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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 : November 20,2013

Revised Date :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Artline Glassboard Marker Color : (White)
 EPG-4

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

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

Recommended use : Marker ink



SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards : Not classified

Health Hazards : Not classified

Environmental Hazards : Classification not possible

LABEL ELEMENTS

Symbols : none

Signal word : none

Hazard statement : none

Precautionary statement

【Prevention】
 Wash hands thoroughly after handling. (P264)

【Response】

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/attention. (P337+P313)

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

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

IF SWALLOWED : Get medical advice/attention if you feel unwell.Rinse mouth. (P301+P314+P330)

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

【Disposal】
 Dispose of contents/container to waste in accordance with (P501)
 local/regional/ national/international regulation (to be specified).



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
Water	40~50	7732-18-5	none	none
Ethanol	1~5	64-17-5	Flam.Liq. 2	H225
Glycol class solvent	5~15	Confidential	none	none
Synthetic resin	1~5	Confidential	none	none
Titanium oxide	25~35	13463-67-7	none	none
Others	5~15	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, absorb with dry sand, soil, sawdust, cloth, etc., then place in a chemical waste containers.

In case of large spills, dike and prevent overflow, cover spills with foam, then place in a chemical container using non-sparking tools.

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 (2013)

Ethanol	STEL	1000ppm
Titanium dioxide	TWA	10 mg/m ³

OSHA PEL

Ethanol	TWA	1000ppm
Titanium dioxide	TWA	15 mg/m ³

DIRECTIVE 2000/39/EC

Not listed

Japan Society for Occupational Health (2013)

Titanium dioxide	Dusts Class 2	OEL(Total dust)	4 mg/m ³
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PERSONAL PROTECTION

- : Respiratory Protection Not required, but wear mask to prevent organic gas,if necessary.
- : Hand Protection Not required, but wear safety gloves, if necessary.
- : Eye Protection Not required, but wear safety glasses, if necessary.
- : Skin Protection Not required, but wear personal protection apron,boots,if necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: white liquid
Odour	: Almost Nothing
pH	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Relative Density (at 25°C)	: 1.2 - 1.4 g/cm ³
Solubility in Water	: soluble

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, CO ₂

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity	: LD/LC50 values that are relevant for classification [Ethanol]
	Oral-rat LD50 7,060mg/kg
	Inhalation-rat LC50 20,000ppm/10h

Carcinogenicity : Titanium dioxide has been classified by the IARC as Group 2B.
Other materials : Not listed by IARC, EPA, EU, NTP.

Regarding the carcinogenicity of titanium dioxide, International Agency for Research on Cancer (IARC) has classified as a group 2B. However, EPA (Environmental Protection Agency), EU (European Chemicals Agency), NTP (National Toxicology Program, USA) in the classification of suspected carcinogenic to humans has not been done. Therefore, we could not classify the carcinogenicity of GHS from that there is no sufficient data.

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)	: None
UN proper shipping name	(DOT, ADR, IMDG, IATA)	: None
UN Classification		: None
Packing group	(DOT, ADR, IMDG, IATA)	: None
Marine pollutant (Y/N)		: N
EmS number		: None

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

Directive 67/548/EEC or 1999/45/EC

Hazard designation

Substance name	: [Ethanol]
Classification	: F; R11
R-Phrase	: R11 Highly flammable.
S-Phrase	: S2 Keep out of the reach of children.
	: S7 Keep container tightly closed.
	: S16 Keep away from sources of ignition - No smoking.

Symbols and indications of danger specific F : Highly flammable

< USA Information >

OSHA STATUS : This product is not hazardous under 29 CFR 1910.1200.

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(2002/95/EC) and ELV Directive(2000/53/EC)
 This product does not contain lead, mercury, cadmium, hexavalent chromium, polybromiated biphenyls (PBB) or polybrominated diphenylethers (PBDE).

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 are 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 are 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.