

# Safety Data Sheet

according to Regulation (EC) No 453/2010

Revision Date : 14.06.2013

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. Product identifier

Product Name : Artline Writing Pens 200 , 210 , 220 Color : (Black)  
EK-200 ,EK-200CC ,EK-210 ,EK-220

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Writing ink

1.3. Details of the supplier of the safety data sheet

Supplier Company Name : Shachihata (Europe) Limited  
Address : Artline Point, Ashville Way, Sutton Weaver, Runcorn, Cheshire WA7 3EZ. UK  
Telephone : 0870 600 5 006  
Fax : 0871 200 5 006  
Contact (e-mail) : [www.artline-xstamper.com](http://www.artline-xstamper.com)

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

1.4. Emergency telephone number

Telephone: 0870 600 5 006

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

2.1.1. Classification (REGULATION (EC) No 1272/2008)

Not classified (ink)

2.1.2. Classification (67/548/EEC, 1999/45/EC)

Not classified (ink)

2.2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms : none

Signal word : none

Hazard statement : none

Precautionary statement

**【Prevention】**

Wash hands thoroughly after handling.

(P264)

**【Response】**

IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

(P304+P340)

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

(P305+P351+P338)

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

If eye irritation persists : Get medical advice/attention.

(P337+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 local/regional/ national/international regulation (to be specified).

(P501)

2.3. Other hazards

No information available.



**SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

Ingredients :

Chemical Name / Generic name	CAS-No. EC-No. Index	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Composition weight %
Water	7732-18-5 231-791-2	none	none	60 ~ 70
ethane-1,2-diol	107-21-1 203-473-3	Xn; R22	Acute Tox.(oral) 4	5 ~ 15
2,2'-oxydiethanol	111-46-6 203-872-2	Xn; R22	Acute Tox.(oral) 4	5 ~ 15
Dyestuff	Confidential	none	none	5 ~ 15
Others	Confidential	none	none	1 ~ 10
total				100

**SECTION 4: First aid measures**

## 4.1. Description of 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: Firefighting measures**

## 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder, foam or carbon dioxide
- Unsuitable extinguishing media : Water jet

## 5.2. Special hazards arising from the substance or mixture

- 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.

## 5.3. Advice for firefighters

- 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**

## 6.1. 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.

## 6.2. Environmental precautions

- Do not throw the leakage thing directly into environment

## 6.3. Methods and material 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.

**SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

- Advice on safe 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.

## 7.2. Conditions for safe storage, including any incompatibilities

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

**SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

## DIRECTIVE 2000/39/EC

ethane-1,2-diol	TWA	20ppm
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## EH40/2005 Workplace exposure limits

ethane-1,2-diol	TWA	20ppm
2,2'-oxydiethanol	TWA	23ppm

## ACGIH (2012)

ethane-1,2-diol	STEL ceiling	100mg/m <sup>3</sup> (H)
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## OSHA PEL

Not listed

## 8.2. Exposure controls

## Personal protective equipment

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

## Environmental exposure controls

- General advice : Prevent product from entering drains.  
 Prevent further leakage or spillage if safe to do so.  
 If the product contaminates rivers and lakes or drains inform respective authorities.

**SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

- Appearance : black liquid
- Odour : odorless
- pH : 7~9
- Boiling point : No data available
- Flash point : Not applicable (closed cup)
- Relative Density (at 25 °C) : 1.0 ~ 1.2 (g/cm<sup>3</sup>)
- Solubility in Water : Insoluble

**SECTION 10: Stability and reactivity**

## 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

## 10.2. Chemical stability

Thermally stable at typical use temperatures.

## 10.3. Possibility of hazardous reactions

No data available

## 10.4. Conditions to Avoid

High temperature, Direct sunlight, Fire

## 10.5. Incompatible Materials

No data available

## 10.6. Hazardous decomposition products

CO, CO<sub>2</sub>

**SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity	: LD/LC50 values that are relevant for classification [ethane-1,2-diol] and [2,2'-oxydiethanol]
Oral-rat	LD50 >300 - <=2,000mg/kg
Dermal-rabbit	LD50 >5,000 mg/kg
Carcinogenicity	: Not listed by IARC, EPA, EU, NTP.

**SECTION 12: Ecological information**

12.1. Toxicity	: No data available
12.2. Persistence and degradability	: No data available
12.3. Bioaccumulative potential	: No data available
12.4. Mobility in soil	: No data available
12.5. Results of PBT and vPvB assessment	: No data available
12.6. Other adverse effects	: No data available

**SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

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**

14.1. UN number	DOT, ADR, IMDG, IATA	: none
14.2. UN proper shipping name	DOT, ADR, IMDG, IATA	: none
14.3. Transport hazard class(es)	DOT, ADR, IMDG, IATA	: none
14.4. Packing group	DOT, ADR, IMDG, IATA	: none
14.5. Environmental hazards	Marine pollutant	: No
14.6. Special precautions for user	EMS Number	: none
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		: Not applicable.

**SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
< EU Information >

## Regulation (EC) No 1272/2008 (CLP)

Substance name	: [ethane-1,2-diol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

Substance name	: [2,2'-oxydiethanol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

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

Substance name	: [ethane-1,2-diol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children.

Symbols and indications of danger specific Xn : Harmful

Substance name	: [2,2'-oxydiethanol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children. S46 If swallowed, seek medical advice immediately and show this container or label.

Symbols and indications of danger specific Xn : Harmful

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

### **SECTION 16: Other information**



EU RoHS Directive(2002/95/EC) and ELV Directive(2000/53/EC)  
This product 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

according to Regulation (EC) No 453/2010

Revision Date : 14.06.2013

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. Product identifier

Product Name : Artline Writing Pens 200 , 210 , 220 Color : (Blue)  
EK-200 ,EK-210 ,EK-220

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Writing ink

1.3. Details of the supplier of the safety data sheet

Supplier Company Name : Shachihata (Europe) Limited  
Address : Artline Point, Ashville Way, Sutton Weaver, Runcorn, Cheshire WA7 3EZ. UK  
Telephone : 0870 600 5 006  
Fax : 0871 200 5 006  
Contact (e-mail) : [www.artline-xstamper.com](http://www.artline-xstamper.com)

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

1.4. Emergency telephone number

Telephone: 0870 600 5 006

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

2.1.1. Classification (REGULATION (EC) No 1272/2008)

Not classified (ink)

2.1.2. Classification (67/548/EEC, 1999/45/EC)

Not classified (ink)

2.2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms : none

Signal word : none

Hazard statement : none

Precautionary statement

**【Prevention】**

Wash hands thoroughly after handling.

(P264)

**【Response】**

IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

(P304+P340)

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

(P305+P351+P338)

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

If eye irritation persists : Get medical advice/attention.

(P337+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 local/regional/ national/international regulation (to be specified).

(P501)

2.3. Other hazards

No information available.



**SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

Ingredients :

Chemical Name / Generic name	CAS-No. EC-No. Index	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Composition weight %
Water	7732-18-5 231-791-2	none	none	60 ~ 70
ethane-1,2-diol	107-21-1 203-473-3	Xn; R22	Acute Tox.(oral) 4	10 ~ 20
2,2'-oxydiethanol	111-46-6 203-872-2	Xn; R22	Acute Tox.(oral) 4	5 ~ 15
Dyestuff	Confidential	none	none	1 ~ 10
Others	Confidential	none	none	1 ~ 10
total				100

**SECTION 4: First aid measures**

## 4.1. Description of 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: Firefighting measures**

## 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder, foam or carbon dioxide  
 Unsuitable extinguishing media : Water jet

## 5.2. Special hazards arising from the substance or mixture

- 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.

## 5.3. Advice for firefighters

- 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**

## 6.1. 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.

## 6.2. Environmental precautions

- Do not throw the leakage thing directly into environment

## 6.3. Methods and material 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.

**SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

- Advice on safe 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.

## 7.2. Conditions for safe storage, including any incompatibilities

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

**SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

## DIRECTIVE 2000/39/EC

ethane-1,2-diol	TWA	20ppm
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## EH40/2005 Workplace exposure limits

ethane-1,2-diol	TWA	20ppm
2,2'-oxydiethanol	TWA	23ppm

## ACGIH (2012)

ethane-1,2-diol	STEL ceiling	100mg/m <sup>3</sup> (H)
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## OSHA PEL

Not listed

## 8.2. Exposure controls

## Personal protective equipment

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

## Environmental exposure controls

- General advice : Prevent product from entering drains.  
 Prevent further leakage or spillage if safe to do so.  
 If the product contaminates rivers and lakes or drains inform respective authorities.

**SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

- Appearance : blue liquid
- Odour : odorless
- pH : 7~9
- Boiling point : No data available
- Flash point : Not applicable (closed cup)
- Relative Density (at 25 °C) : 1.0 ~ 1.2 (g/cm<sup>3</sup>)
- Solubility in Water : Insoluble

**SECTION 10: Stability and reactivity**

## 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

## 10.2. Chemical stability

Thermally stable at typical use temperatures.

## 10.3. Possibility of hazardous reactions

No data available

## 10.4. Conditions to Avoid

High temperature, Direct sunlight, Fire

## 10.5. Incompatible Materials

No data available

## 10.6. Hazardous decomposition products

CO, CO<sub>2</sub>



**SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity	: LD/LC50 values that are relevant for classification [ethane-1,2-diol] and [2,2'-oxydiethanol]
Oral-rat	LD50 >300 - <=2,000mg/kg
Dermal-rabbit	LD50 >5,000 mg/kg
Carcinogenicity	: Not listed by IARC, EPA, EU, NTP.

**SECTION 12: Ecological information**

12.1. Toxicity	: No data available
12.2. Persistence and degradability	: No data available
12.3. Bioaccumulative potential	: No data available
12.4. Mobility in soil	: No data available
12.5. Results of PBT and vPvB assessment	: No data available
12.6. Other adverse effects	: No data available

**SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

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**

14.1. UN number	DOT, ADR, IMDG, IATA	: none
14.2. UN proper shipping name	DOT, ADR, IMDG, IATA	: none
14.3. Transport hazard class(es)	DOT, ADR, IMDG, IATA	: none
14.4. Packing group	DOT, ADR, IMDG, IATA	: none
14.5. Environmental hazards	Marine pollutant	: No
14.6. Special precautions for user	EMS Number	: none
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		: Not applicable.

**SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
< EU Information >

## Regulation (EC) No 1272/2008 (CLP)

Substance name	: [ethane-1,2-diol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

Substance name	: [2,2'-oxydiethanol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

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

Substance name	: [ethane-1,2-diol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children.

Symbols and indications of danger specific Xn : Harmful

Substance name	: [2,2'-oxydiethanol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children. S46 If swallowed, seek medical advice immediately and show this container or label.

Symbols and indications of danger specific Xn : Harmful

### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

## SECTION 16: Other information



EU RoHS Directive(2002/95/EC) and ELV Directive(2000/53/EC)  
This product 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

according to Regulation (EC) No 453/2010

Revision Date : 14.06.2013

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. Product identifier

Product Name : Artline Writing Pens 200 , 210 , 220 Color : (Red)  
EK-200 ,EK-210 ,EK-220

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Writing ink

1.3. Details of the supplier of the safety data sheet

Supplier Company Name : Shachihata (Europe) Limited  
Address : Artline Point, Ashville Way, Sutton Weaver, Runcorn, Cheshire WA7 3EZ. UK  
Telephone : 0870 600 5 006  
Fax : 0871 200 5 006  
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1.4. Emergency telephone number

Telephone: 0870 600 5 006

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

2.1.1. Classification (REGULATION (EC) No 1272/2008)

Not classified (ink)

2.1.2. Classification (67/548/EEC, 1999/45/EC)

Not classified (ink)

2.2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms : none

Signal word : none

Hazard statement : none

Precautionary statement

**【Prevention】**

Wash hands thoroughly after handling.

(P264)

**【Response】**

IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

(P304+P340)

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

(P305+P351+P338)

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

If eye irritation persists : Get medical advice/attention.

(P337+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 local/regional/ national/international regulation (to be specified).

(P501)

2.3. Other hazards

No information available.



**SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

Ingredients :

Chemical Name / Generic name	CAS-No. EC-No. Index	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Composition weight %
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- 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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## 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder, foam or carbon dioxide
- Unsuitable extinguishing media : Water jet

## 5.2. Special hazards arising from the substance or mixture

- 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.

## 5.3. Advice for firefighters

- In the extinction work, an appropriate protective equipment (gloves, glasses, and mask) has to be worn.
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- Do not throw the leakage thing directly into environment

## 6.3. Methods and material 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.

**SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

- Advice on safe 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.

## 7.2. Conditions for safe storage, including any incompatibilities

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

**SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

## DIRECTIVE 2000/39/EC

ethane-1,2-diol	TWA	20ppm
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## EH40/2005 Workplace exposure limits

ethane-1,2-diol	TWA	20ppm
2,2'-oxydiethanol	TWA	23ppm

## ACGIH (2012)

ethane-1,2-diol	STEL ceiling	100mg/m <sup>3</sup> (H)
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## OSHA PEL

Not listed

## 8.2. Exposure controls

## Personal protective equipment

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

## Environmental exposure controls

- General advice : Prevent product from entering drains.  
 Prevent further leakage or spillage if safe to do so.  
 If the product contaminates rivers and lakes or drains inform respective authorities.

**SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

- Appearance : red liquid
- Odour : odorless
- pH : 7~9
- Boiling point : No data available
- Flash point : Not applicable (closed cup)
- Relative Density (at 25 °C) : 1.0 ~ 1.2 (g/cm<sup>3</sup>)
- Solubility in Water : Insoluble

**SECTION 10: Stability and reactivity**

## 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

## 10.2. Chemical stability

Thermally stable at typical use temperatures.

## 10.3. Possibility of hazardous reactions

No data available

## 10.4. Conditions to Avoid

High temperature, Direct sunlight, Fire

## 10.5. Incompatible Materials

No data available

## 10.6. Hazardous decomposition products

CO, CO<sub>2</sub>

**SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity	: LD/LC50 values that are relevant for classification [ethane-1,2-diol] and [2,2'-oxydiethanol]
Oral-rat	LD50 >300 - <=2,000mg/kg
Dermal-rabbit	LD50 >5,000 mg/kg
Carcinogenicity	: Not listed by IARC, EPA, EU, NTP.

**SECTION 12: Ecological information**

12.1. Toxicity	: No data available
12.2. Persistence and degradability	: No data available
12.3. Bioaccumulative potential	: No data available
12.4. Mobility in soil	: No data available
12.5. Results of PBT and vPvB assessment	: No data available
12.6. Other adverse effects	: No data available

**SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

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**

14.1. UN number	DOT, ADR, IMDG, IATA	: none
14.2. UN proper shipping name	DOT, ADR, IMDG, IATA	: none
14.3. Transport hazard class(es)	DOT, ADR, IMDG, IATA	: none
14.4. Packing group	DOT, ADR, IMDG, IATA	: none
14.5. Environmental hazards	Marine pollutant	: No
14.6. Special precautions for user	EMS Number	: none
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		: Not applicable.

**SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
< EU Information >

## Regulation (EC) No 1272/2008 (CLP)

Substance name	: [ethane-1,2-diol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

Substance name	: [2,2'-oxydiethanol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

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

Substance name	: [ethane-1,2-diol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children.

Symbols and indications of danger specific Xn : Harmful

Substance name	: [2,2'-oxydiethanol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children. S46 If swallowed, seek medical advice immediately and show this container or label.

Symbols and indications of danger specific Xn : Harmful

### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

## SECTION 16: Other information



EU RoHS Directive(2002/95/EC) and ELV Directive(2000/53/EC)  
This product 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

according to Regulation (EC) No 453/2010

Revision Date : 14.06.2013

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. Product identifier

Product Name : Artline Writing Pens 200 , 210 , 220 Color : (Green)  
EK-200 ,EK-210 ,EK-220

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Writing ink

1.3. Details of the supplier of the safety data sheet

Supplier Company Name : Shachihata (Europe) Limited  
Address : Artline Point, Ashville Way, Sutton Weaver, Runcorn, Cheshire WA7 3EZ. UK  
Telephone : 0870 600 5 006  
Fax : 0871 200 5 006  
Contact (e-mail) : [www.artline-xstamper.com](http://www.artline-xstamper.com)

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

1.4. Emergency telephone number

Telephone: 0870 600 5 006

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

2.1.1. Classification (REGULATION (EC) No 1272/2008)

Not classified (ink)

2.1.2. Classification (67/548/EEC, 1999/45/EC)

Not classified (ink)

2.2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms : none

Signal word : none

Hazard statement : none

Precautionary statement

**【Prevention】**

Wash hands thoroughly after handling.

(P264)

**【Response】**

IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

(P304+P340)

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

(P305+P351+P338)

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

If eye irritation persists : Get medical advice/attention.

(P337+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 local/regional/ national/international regulation (to be specified).

(P501)

2.3. Other hazards

No information available.





**SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

Ingredients :

Chemical Name / Generic name	CAS-No. EC-No. Index	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Composition weight %
Water	7732-18-5 231-791-2	none	none	60 ~ 70
ethane-1,2-diol	107-21-1 203-473-3	Xn; R22	Acute Tox.(oral) 4	10 ~ 20
2,2'-oxydiethanol	111-46-6 203-872-2	Xn; R22	Acute Tox.(oral) 4	5 ~ 15
Dyestuff	Confidential	none	none	1 ~ 10
Others	Confidential	none	none	1 ~ 10
total				100

**SECTION 4: First aid measures**

## 4.1. Description of 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: Firefighting measures**

## 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder, foam or carbon dioxide
- Unsuitable extinguishing media : Water jet

## 5.2. Special hazards arising from the substance or mixture

- 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.

## 5.3. Advice for firefighters

- 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**

## 6.1. 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.

## 6.2. Environmental precautions

- Do not throw the leakage thing directly into environment

## 6.3. Methods and material 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.

**SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

- Advice on safe 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.

## 7.2. Conditions for safe storage, including any incompatibilities

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

**SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

## DIRECTIVE 2000/39/EC

ethane-1,2-diol	TWA	20ppm
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## EH40/2005 Workplace exposure limits

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## ACGIH (2012)

ethane-1,2-diol	STEL ceiling	100mg/m <sup>3</sup> (H)
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## OSHA PEL

Not listed

## 8.2. Exposure controls

## Personal protective equipment

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

## Environmental exposure controls

- General advice : Prevent product from entering drains.  
 Prevent further leakage or spillage if safe to do so.  
 If the product contaminates rivers and lakes or drains inform respective authorities.

**SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

- Appearance : green liquid
- Odour : odorless
- pH : 7~9
- Boiling point : No data available
- Flash point : Not applicable (closed cup)
- Relative Density (at 25 °C) : 1.0 ~ 1.2 (g/cm<sup>3</sup>)
- Solubility in Water : Insoluble

**SECTION 10: Stability and reactivity**

## 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

## 10.2. Chemical stability

Thermally stable at typical use temperatures.

## 10.3. Possibility of hazardous reactions

No data available

## 10.4. Conditions to Avoid

High temperature, Direct sunlight, Fire

## 10.5. Incompatible Materials

No data available

## 10.6. Hazardous decomposition products

CO, CO<sub>2</sub>

**SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity	: LD/LC50 values that are relevant for classification [ethane-1,2-diol] and [2,2'-oxydiethanol]
Oral-rat	LD50 >300 - <=2,000mg/kg
Dermal-rabbit	LD50 >5,000 mg/kg
Carcinogenicity	: Not listed by IARC, EPA, EU, NTP.

**SECTION 12: Ecological information**

12.1. Toxicity	: No data available
12.2. Persistence and degradability	: No data available
12.3. Bioaccumulative potential	: No data available
12.4. Mobility in soil	: No data available
12.5. Results of PBT and vPvB assessment	: No data available
12.6. Other adverse effects	: No data available

**SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

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**

14.1. UN number	DOT, ADR, IMDG, IATA	: none
14.2. UN proper shipping name	DOT, ADR, IMDG, IATA	: none
14.3. Transport hazard class(es)	DOT, ADR, IMDG, IATA	: none
14.4. Packing group	DOT, ADR, IMDG, IATA	: none
14.5. Environmental hazards	Marine pollutant	: No
14.6. Special precautions for user	EMS Number	: none
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		: Not applicable.

**SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
< EU Information >

## Regulation (EC) No 1272/2008 (CLP)

Substance name	: [ethane-1,2-diol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

Substance name	: [2,2'-oxydiethanol]
Hazard Class & Category	: Acute toxicity - Oral, Category 4
Symbols	: GHS07
Signal word	: Warning
Hazard statements	: H302 Harmful if swallowed

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

Substance name	: [ethane-1,2-diol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children.

Symbols and indications of danger specific Xn : Harmful

Substance name	: [2,2'-oxydiethanol]
Classification	: Xn; R22
R-Phrase	: R22 Harmful if swallowed.
S-Phrase	: S2 Keep out of the reach of children. S46 If swallowed, seek medical advice immediately and show this container or label.

Symbols and indications of danger specific Xn : Harmful

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

### **SECTION 16: Other information**



EU RoHS Directive(2002/95/EC) and ELV Directive(2000/53/EC)  
This product 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.