

# Safety Data Sheet

according to Safe Work Australia document

"Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice December 2011"

Issued Date : 7th Aug. 2019

Revised Date :

**SECTION 1: Identification ; Chemical product and company identification**

**1.1. Product identifier**

Product Name : Artline WHITEBOARD MARKER Colour : (Black)  
 EK-500, EK-509  
 Artline REFILL INK FOR WHITEBOARD MARKER  
 ESK-50



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

Recommended use : Whiteboard marker ink



**1.3. Details of the supplier of the safety data sheet**

Supplier Company Name : ACCO Brands Australia Pty Ltd  
 Address : 2 Coronation Avenue, Kings Park, 2148 NSW, Australia  
 Phone : 02 9694 0900 (9am to 5pm AEST, Monday to Friday)  
 Contact (e-mail) : [sds.anz@acco.com](mailto:sds.anz@acco.com)  
 Website : [www.accobrand.com.au](http://www.accobrand.com.au)

Manufacturer Company Name : Shachihata Inc.  
 Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan  
 Phone : +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**

Poisons Information Centre : 13 11 26

**SECTION 2: Hazards identification**

Hazardous Substance , Dangerous Goods.

Classified as hazardous according to the criteria of Safe Work Australia (SWA - formerly NOHSC), and as Dangerous Goods according to the Australian Dangerous Goods (ADG) Code for Transport by Road and Rail.

**2.1. Classification of the substance or mixture**

**2.1.1. Classification (SWA)**

Flammable liquids, Category 2	H225 : Highly flammable liquid and vapour
Eye irritation, Category 2A	H319 : Causes serious eye irritation
Specific target organ toxicity ; single exposure, Category 3 (narcotic effects)	H336 : May cause drowsiness or dizziness

**2.2. Label elements**

Labelling (SWA)

Symbols :

Signal word : Danger

Hazard statement : Highly flammable liquid and vapour  
 Causes serious eye irritation  
 May cause drowsiness or dizziness

(H225)

(H319)

(H336)

**Precautionary statement****【Prevention】**

Keep out of reach of children. (P102)

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

Take precautionary measures against static discharge. (P243)

Avoid breathing vapours. (P261)

Wash hands thoroughly after handling. (P264)

Use only outdoors or in a well-ventilated area. (P271)

Wear eye protection. (P280)

**【Response】**

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

IF INHALED : Remove person to fresh air and keep comfortable for breathing. (P304+P340)

Call a POISON CENTER or physician if you feel unwell. (P312)

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

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

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

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

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

**【Storage】**

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

**【Disposal】**

Dispose of contents and container in accordance with local regulations. (P501)

**2.3. Other hazards**

No information available.

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

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
2-Pentanone, 4-methyl-	10 ~ 20	108-10-1	Flam. Liq. 2 Acute Tox. (inhal.) 4 Eye Irrit. 2 STOT. SE. 3	H225 H332 H319 H335
Acetic acid, butyl ester	35 ~ 45	123-86-4	Flam. Liq. 3 STOT. SE. 3	H226 H336
1-Butanol, 3-methyl-, 1-acetate	20 ~ 30	123-92-2	Flam. Liq. 3	H226
Synthetic resin	1 ~ 10	Confidential	none	none
Carbon black	1 ~ 10	1333-86-4	none	none
Additive	5 ~ 15	Confidential	none	none
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, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

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

## **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 and personal protection**

### **8.1. Control parameters**

Australian exposure standards(2018)

2-Pentanone, 4-methyl- TWA 50 ppm

Acetic acid, butyl ester TWA 150 ppm

1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

Carbon black TWA 3 mg/m<sup>3</sup>

EH40/2005 Workplace exposure limits (Second edition, published 2011)

2-Pentanone, 4-methyl- TWA 50 ppm

Acetic acid, butyl ester TWA 150 ppm

Carbon black TWA 3.5 mg/m<sup>3</sup>

ACGIH (2019)

2-Pentanone, 4-methyl- STEL 20 ppm

Acetic acid, butyl ester TWA 50 ppm

1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

Carbon black TWA 3 mg/m<sup>3</sup>

**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 : minor solvent odour
- pH : Not applicable
- Boiling point : 114 ~ 142°C
- Flash point : 21°C (closed cup)
- Relative Density (at 25°C) : 0.8 ~ 0.9 (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
- |                                   |      |                        |
|-----------------------------------|------|------------------------|
| [2-Pentanone, 4-methyl-]          |      |                        |
| Oral-rat                          | LD50 | >2,000 - <=5,000 mg/kg |
| Dermal-rabbit                     | LD50 | >5,000 mg/kg           |
| Inhalation-rat                    | LC50 | >10 - <=20 mg/L/4h     |
| [Acetic acid, butyl ester ]       |      |                        |
| Oral-rat                          | LD50 | >5,000 mg/kg           |
| Dermal-rabbit                     | LD50 | >5,000 mg/kg           |
| [1-Butanol, 3-methyl-, 1-acetate] |      |                        |
| Oral-rat                          | LD50 | >5,000 mg/kg           |
| Dermal-rabbit                     | LD50 | >5,000 mg/kg           |
- Eye irritation** : Category 2A Causes serious eye irritation
- Specific target organ toxicity (single exposure)** : Category 3 May cause drowsiness or dizziness
- Carcinogenicity** : Carbon black has been classified by the IARC as Group 2B.  
 2-Pentanone, 4-methyl- has been classified by the IARC as Group 2B.  
 Other materials ; Not contain any component that is considered

a human carcinogen by IARC, ACGIH, EPA, EU or NTP.

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

**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**

Determination of whether a Dangerous Good based on ADG Code criteria.  
 UN Numbers listed as "UN" followed by 4 digits.  
 Dangerous Good Classes and Labels for all Dangerous Goods.  
 Special Provisions listed.  
 Road – ADG – Australian Dangerous Goods Code (Road and Rail)  
 Air – IATA – International Air Transport Association  
 Sea – IMDG – International Maritime Dangerous Goods

- 14.1. UN number ADG, IMDG, IATA : UN1210
- 14.2. UN proper shipping name ADG, IMDG, IATA : PRINTING INK, flammable
- 14.3. Transport hazard class(es) ADG, IMDG, IATA :
  - Class 3 (Flammable liquids)
  - Label 3
- 14.4. Packing group ADG, IMDG, IATA : II
- 14.5. Environmental hazards Marine pollutant : No
- 14.6. Special precautions for user EMS Number : F-E,S-D
- 14.7. HAZCHEM Code : 3YE (ADG7)



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Artline WHITEBOARD MARKER (EK-500, EK-509) is not a hazardous material by the special provision.

Artline WHITEBOARD MARKER (EK-500, EK-509) (The amount of ink : less than 10ml)

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

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

## SECTION 15: Regulatory information

This product does not contain any hazardous chemical that has been determined by Montreal Protocol (Ozone depleting substances), The Stockholm Convention (Persistent Organic Pollutants), and The Rotterdam Convention (Prior Informed Consent).

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

### References

Model Code of Practice	Preparation of Safety Data Sheets for Hazardous Chemicals Labelling of Workplace Hazardous Chemicals National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)]
GHS	Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Safe Work Australia HSIS	<a href="http://hsis.safeworkaustralia.gov.au/HazardousSubstance">http://hsis.safeworkaustralia.gov.au/HazardousSubstance</a>
WES	Workplace Exposure Standards for Airborne Contaminants (2018)
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, National Transport Commission. (ADG7)



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 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.

EU RoHS (Directive 2011/65/EU, DIRECTIVE (EU) 2015/863)

EU ELV (DIRECTIVE 2000/53/EC)

# Safety Data Sheet

according to Safe Work Australia document

"Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice December 2011"

Issued Date : 7th Aug. 2019

Revised Date :

**SECTION 1: Identification ; Chemical product and company identification**

**1.1. Product identifier**

Product Name : Artline WHITEBOARD MARKER Colour : (Blue)  
 EK-500, EK-509  
 Artline REFILL INK FOR WHITEBOARD MARKER  
 ESK-50



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

Recommended use : Whiteboard marker ink



**1.3. Details of the supplier of the safety data sheet**

Supplier Company Name : ACCO Brands Australia Pty Ltd  
 Address : 2 Coronation Avenue, Kings Park, 2148 NSW, Australia  
 Phone : 02 9694 0900 (9am to 5pm AEST, Monday to Friday)  
 Contact (e-mail) : [sds.anz@acco.com](mailto:sds.anz@acco.com)  
 Website : [www.accobrand.com.au](http://www.accobrand.com.au)

Manufacturer Company Name : Shachihata Inc.  
 Address : 4-69,Amazuka-cho,Nishi-ku,Nagoya City,451-0021,Japan  
 Phone : +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**

Poisons Information Centre : 13 11 26

**SECTION 2: Hazards identification**

Hazardous Substance , Dangerous Goods.

Classified as hazardous according to the criteria of Safe Work Australia (SWA - formerly NOHSC), and as Dangerous Goods according to the Australian Dangerous Goods (ADG) Code for Transport by Road and Rail.

**2.1. Classification of the substance or mixture**

**2.1.1. Classification (SWA)**

Flammable liquids, Category 2	H225 : Highly flammable liquid and vapour
Eye irritation, Category 2A	H319 : Causes serious eye irritation
Specific target organ toxicity ; single exposure, Category 3 (narcotic effects)	H336 : May cause drowsiness or dizziness

**2.2. Label elements**

Labelling (SWA)

Symbols :  

Signal word : Danger

Hazard statement	: Highly flammable liquid and vapour	(H225)
	: Causes serious eye irritation	(H319)
	: May cause drowsiness or dizziness	(H336)

## Precautionary statement

## 【Prevention】

- Keep out of reach of children. (P102)
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
- Take precautionary measures against static discharge. (P243)
- Avoid breathing vapours. (P261)
- Wash hands thoroughly after handling. (P264)
- Use only outdoors or in a well-ventilated area. (P271)
- Wear eye protection. (P280)

## 【Response】

- In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)
- IF INHALED : Remove person to fresh air and keep comfortable for breathing. (P304+P340)
- Call a POISON CENTER or physician if you feel unwell. (P312)
- IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)
- Remove contact lenses, if present and easy to do. Continue rinsing. (P337+P313)
- If eye irritation persists : Get medical advice and attention. (P303+P361+P353)
- IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P332+P313)
- If skin irritation occurs : Get medical advice and attention. (P332+P313)

## 【Storage】

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

## 【Disposal】

- Dispose of contents and container in accordance with local regulations. (P501)

## 2.3. Other hazards

No information available.

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

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
2-Pentanone, 4-methyl-	10 ~ 20	108-10-1	Flam. Liq. 2 Acute Tox. (inhal.) 4 Eye Irrit. 2 STOT. SE. 3	H225 H332 H319 H335
Acetic acid, butyl ester	35 ~ 45	123-86-4	Flam. Liq. 3 STOT. SE. 3	H226 H336
1-Butanol, 3-methyl-, 1-acetate	20 ~ 30	123-92-2	Flam. Liq. 3	H226
Synthetic resin	1 ~ 10	Confidential	none	none
Organic pigment	1 ~ 10	Confidential	none	none
Additive	5 ~ 15	Confidential	none	none
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, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.  
 In case of large spills, prevent leakage by enclosing with nonflammables (earth and sand, etc.) and collect into empty container by scoop, suction equipment or the like.

**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 and personal protection**

**8.1. Control parameters**

Australian exposure standards(2018)  
 2-Pentanone, 4-methyl- TWA 50 ppm  
 Acetic acid, butyl ester TWA 150 ppm  
 1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

EH40/2005 Workplace exposure limits (Second edition, published 2011)

2-Pentanone, 4-methyl- TWA 50 ppm  
 Acetic acid, butyl ester TWA 150 ppm

ACGIH (2019)

2-Pentanone, 4-methyl- STEL 20 ppm  
 Acetic acid, butyl ester TWA 50 ppm  
 1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

**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 : minor solvent odour  
 pH : Not applicable  
 Boiling point : 114 ~ 142°C  
 Flash point : 21°C (closed cup)  
 Relative Density (at 25°C) : 0.8 ~ 0.9 (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  
 [2-Pentanone, 4-methyl-]  
 Oral-rat LD50 >2,000 - <=5,000 mg/kg  
 Dermal-rabbit LD50 >5,000 mg/kg  
 Inhalation-rat LC50 >10 - <=20 mg/L/4h  
 [Acetic acid, butyl ester ]  
 Oral-rat LD50 >5,000 mg/kg  
 Dermal-rabbit LD50 >5,000 mg/kg  
 [1-Butanol, 3-methyl-, 1-acetate]  
 Oral-rat LD50 >5,000 mg/kg  
 Dermal-rabbit LD50 >5,000 mg/kg
- Eye irritation** : Category 2A Causes serious eye irritation
- Specific target organ toxicity (single exposure)** : Category 3 May cause drowsiness or dizziness
- Carcinogenicity** : 2-Pentanone, 4-methyl- has been classified by the IARC as Group 2B.  
 Other materials ; Not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or 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**

Determination of whether a Dangerous Good based on ADG Code criteria.  
 UN Numbers listed as "UN" followed by 4 digits.  
 Dangerous Good Classes and Labels for all Dangerous Goods.  
 Special Provisions listed.  
 Road – ADG – Australian Dangerous Goods Code (Road and Rail)  
 Air – IATA – International Air Transport Association  
 Sea – IMDG – International Maritime Dangerous Goods

- 14.1. UN number ADG, IMDG, IATA : UN1210
- 14.2. UN proper shipping name ADG, IMDG, IATA : PRINTING INK, flammable
- 14.3. Transport hazard class(es) ADG, IMDG, IATA :
  - Class 3 (Flammable liquids)
  - Label 3
- 14.4. Packing group ADG, IMDG, IATA : II
- 14.5. Environmental hazards Marine pollutant : No
- 14.6. Special precautions for user EMS Number : F-E,S-D
- 14.7. HAZCHEM Code : 3YE (ADG7)



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Artline WHITEBOARD MARKER (EK-500, EK-509) is not a hazardous material by the special provision.

Artline WHITEBOARD MARKER (EK-500, EK-509) (The amount of ink : less than 10ml)

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

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

**SECTION 15: Regulatory information**

This product does not contain any hazardous chemical that has been determined by Montreal Protocol (Ozone depleting substances), The Stockholm Convention (Persistent Organic Pollutants), and The Rotterdam Convention (Prior Informed Consent).

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
- 15.2. Chemical safety assessment
  - No Chemical Safety Assessment has been carried out for this mixture by the supplier.

**SECTION 16: Other information****References**

Model Code of Practice	Preparation of Safety Data Sheets for Hazardous Chemicals Labelling of Workplace Hazardous Chemicals National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)]
GHS	Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Safe Work Australia HSIS	<a href="http://hsis.safeworkaustralia.gov.au/HazardousSubstance">http://hsis.safeworkaustralia.gov.au/HazardousSubstance</a>
WES	Workplace Exposure Standards for Airborne Contaminants (2018)
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, National Transport Commission. (ADG7)



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.

EU RoHS (Directive 2011/65/EU, DIRECTIVE (EU) 2015/863)

EU ELV (DIRECTIVE 2000/53/EC)

# Safety Data Sheet

according to Safe Work Australia document

"Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice December 2011"

Issued Date : 7th Aug. 2019

Revised Date :

## SECTION 1: Identification ; Chemical product and company identification

### 1.1. Product identifier

Product Name : Artline WHITEBOARD MARKER Colour : (Green)

EK-500, EK-509

Artline REFILL INK FOR WHITEBOARD MARKER

ESK-50



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

Recommended use : Whiteboard marker ink



### 1.3. Details of the supplier of the safety data sheet

Supplier Company Name : ACCO Brands Australia Pty Ltd  
 Address : 2 Coronation Avenue, Kings Park, 2148 NSW, Australia  
 Phone : 02 9694 0900 (9am to 5pm AEST, Monday to Friday)  
 Contact (e-mail) : [sds.anz@acco.com](mailto:sds.anz@acco.com)  
 Website : [www.accobrand.com.au](http://www.accobrand.com.au)

Manufacturer Company Name : Shachihata Inc.  
 Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan  
 Phone : +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

Poisons Information Centre : 13 11 26

## SECTION 2: Hazards identification

Hazardous Substance , Dangerous Goods.

Classified as hazardous according to the criteria of Safe Work Australia (SWA - formerly NOHSC), and as Dangerous Goods according to the Australian Dangerous Goods (ADG) Code for Transport by Road and Rail.

### 2.1. Classification of the substance or mixture

#### 2.1.1. Classification (SWA)

Flammable liquids, Category 2

H225 : Highly flammable liquid and vapour

Eye irritation, Category 2A

H319 : Causes serious eye irritation

Specific target organ toxicity ; single exposure, Category 3  
 (narcotic effects)

H336 : May cause drowsiness or dizziness

### 2.2. Label elements

Labelling (SWA)

Symbols :



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour  
 Causes serious eye irritation  
 May cause drowsiness or dizziness

(H225)

(H319)

(H336)

**Precautionary statement****【Prevention】**

Keep out of reach of children. (P102)

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

Take precautionary measures against static discharge. (P243)

Avoid breathing vapours. (P261)

Wash hands thoroughly after handling. (P264)

Use only outdoors or in a well-ventilated area. (P271)

Wear eye protection. (P280)

**【Response】**

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

IF INHALED : Remove person to fresh air and keep comfortable for breathing. (P304+P340)

Call a POISON CENTER or physician if you feel unwell. (P312)

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

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

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

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

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

**【Storage】**

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

**【Disposal】**

Dispose of contents and container in accordance with local regulations. (P501)

**2.3. Other hazards**

No information available.

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

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
2-Pentanone, 4-methyl-	10 ~ 20	108-10-1	Flam. Liq. 2 Acute Tox. (inhal.) 4 Eye Irrit. 2 STOT. SE. 3	H225 H332 H319 H335
Acetic acid, butyl ester	35 ~ 45	123-86-4	Flam. Liq. 3 STOT. SE. 3	H226 H336
1-Butanol, 3-methyl-, 1-acetate	20 ~ 30	123-92-2	Flam. Liq. 3	H226
Synthetic resin	1 ~ 10	Confidential	none	none
Organic pigment	1 ~ 10	Confidential	none	none
Additive	5 ~ 15	Confidential	none	none
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, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

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

## **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 and personal protection**

### **8.1. Control parameters**

Australian exposure standards(2018)

2-Pentanone, 4-methyl- TWA 50 ppm

Acetic acid, butyl ester TWA 150 ppm

1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

EH40/2005 Workplace exposure limits (Second edition, published 2011)

2-Pentanone, 4-methyl- TWA 50 ppm

Acetic acid, butyl ester TWA 150 ppm

ACGIH (2019)

2-Pentanone, 4-methyl- STEL 20 ppm

Acetic acid, butyl ester TWA 50 ppm

1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

### **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 : minor solvent odour
- pH : Not applicable
- Boiling point : 114 ~ 142°C
- Flash point : 21°C (closed cup)
- Relative Density (at 25°C) : 0.8 ~ 0.9 (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
  - [2-Pentanone, 4-methyl-]
    - Oral-rat LD50 >2,000 - <=5,000 mg/kg
    - Dermal-rabbit LD50 >5,000 mg/kg
    - Inhalation-rat LC50 >10 - <=20 mg/L/4h
  - [Acetic acid, butyl ester ]
    - Oral-rat LD50 >5,000 mg/kg
    - Dermal-rabbit LD50 >5,000 mg/kg
  - [1-Butanol, 3-methyl-, 1-acetate]
    - Oral-rat LD50 >5,000 mg/kg
    - Dermal-rabbit LD50 >5,000 mg/kg
- Eye irritation : Category 2A Causes serious eye irritation
- Specific target organ toxicity (single exposure) : Category 3 May cause drowsiness or dizziness
- Carcinogenicity : 2-Pentanone, 4-methyl- has been classified by the IARC as Group 2B.  
Other materials ; Not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or 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**

Determination of whether a Dangerous Good based on ADG Code criteria.  
 UN Numbers listed as "UN" followed by 4 digits.  
 Dangerous Good Classes and Labels for all Dangerous Goods.  
 Special Provisions listed.  
 Road – ADG – Australian Dangerous Goods Code (Road and Rail)  
 Air – IATA – International Air Transport Association  
 Sea – IMDG – International Maritime Dangerous Goods

- 14.1. UN number ADG, IMDG, IATA : UN1210
- 14.2. UN proper shipping name ADG, IMDG, IATA : PRINTING INK, flammable
- 14.3. Transport hazard class(es) ADG, IMDG, IATA :
  - Class 3 (Flammable liquids)
  - Label 3
- 14.4. Packing group ADG, IMDG, IATA : II
- 14.5. Environmental hazards Marine pollutant : No
- 14.6. Special precautions for user EMS Number : F-E,S-D
- 14.7. HAZCHEM Code : 3YE (ADG7)



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Artline WHITEBOARD MARKER (EK-500, EK-509) is not a hazardous material by the special provision.

Artline WHITEBOARD MARKER (EK-500, EK-509) (The amount of ink : less than 10ml)

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

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

**SECTION 15: Regulatory information**

This product does not contain any hazardous chemical that has been determined by Montreal Protocol (Ozone depleting substances), The Stockholm Convention (Persistent Organic Pollutants), and The Rotterdam Convention (Prior Informed Consent).

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
- 15.2. Chemical safety assessment
  - No Chemical Safety Assessment has been carried out for this mixture by the supplier.

**SECTION 16: Other information**

**References**

Model Code of Practice	Preparation of Safety Data Sheets for Hazardous Chemicals Labelling of Workplace Hazardous Chemicals National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)]
GHS	Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Safe Work Australia HSIS	<a href="http://hsis.safeworkaustralia.gov.au/HazardousSubstance">http://hsis.safeworkaustralia.gov.au/HazardousSubstance</a>
WES	Workplace Exposure Standards for Airborne Contaminants (2018)
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, National Transport Commission. (ADG7)



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.

EU RoHS (Directive 2011/65/EU, DIRECTIVE (EU) 2015/863)  
EU ELV (DIRECTIVE 2000/53/EC)

# Safety Data Sheet

according to Safe Work Australia document

"Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice December 2011"

Issued Date : 7th Aug. 2019

Revised Date :

**SECTION 1: Identification ; Chemical product and company identification**

**1.1. Product identifier**

Product Name : Artline WHITEBOARD MARKER Colour : (Red)  
 EK-500, EK-509  
 Artline REFILL INK FOR WHITEBOARD MARKER  
 ESK-50



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

Recommended use : Whiteboard marker ink



**1.3. Details of the supplier of the safety data sheet**

Supplier Company Name : ACCO Brands Australia Pty Ltd  
 Address : 2 Coronation Avenue, Kings Park, 2148 NSW, Australia  
 Phone : 02 9694 0900 (9am to 5pm AEST, Monday to Friday)  
 Contact (e-mail) : [sds.anz@acco.com](mailto:sds.anz@acco.com)  
 Website : [www.accobrand.com.au](http://www.accobrand.com.au)

Manufacturer Company Name : Shachihata Inc.  
 Address : 4-69, Amazuka-cho, Nishi-ku, Nagoya City, 451-0021, Japan  
 Phone : +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**

Poisons Information Centre : 13 11 26

**SECTION 2: Hazards identification**

Hazardous Substance , Dangerous Goods.

Classified as hazardous according to the criteria of Safe Work Australia (SWA - formerly NOHSC), and as Dangerous Goods according to the Australian Dangerous Goods (ADG) Code for Transport by Road and Rail.

**2.1. Classification of the substance or mixture**

**2.1.1. Classification (SWA)**

Flammable liquids, Category 2	H225 : Highly flammable liquid and vapour
Eye irritation, Category 2A	H319 : Causes serious eye irritation
Acute toxicity (inhal.), Category 4	H332 : Harmful if inhaled
Specific target organ toxicity ; single exposure, Category 3 (respiratory tract irritation, narcotic effects)	H335 : May cause respiratory irritation H336 : May cause drowsiness or dizziness

**2.2. Label elements**

Labelling (SWA)

Symbols :

Signal word : Danger

Hazard statement : Highly flammable liquid and vapour (H225)  
 Causes serious eye irritation (H319)  
 Harmful if inhaled (H332)

May cause respiratory irritation (H335)  
 May cause drowsiness or dizziness (H336)

#### Precautionary statement

##### 【Prevention】

Keep out of reach of children. (P102)  
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)  
 Take precautionary measures against static discharge. (P243)  
 Avoid breathing vapours. (P261)  
 Wash hands thoroughly after handling. (P264)  
 Use only outdoors or in a well-ventilated area. (P271)  
 Wear eye protection. (P280)

##### 【Response】

In case of fire : Use dry chemical powder, foam or carbon dioxide to extinguish. (P370+P378)  
 IF INHALED : Remove person to fresh air and keep comfortable for breathing. (P304+P340)  
 Call a POISON CENTER or physician if you feel unwell. (P312)  
 IF IN EYES : Rinse cautiously with water for several minutes. (P305+P351+P338)  
     Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists : Get medical advice and attention. (P337+P313)  
 IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)  
 If skin irritation occurs : Get medical advice and attention. (P332+P313)

##### 【Storage】

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

##### 【Disposal】

Dispose of contents and container in accordance with local regulations. (P501)

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

Ingredients :

Chemical Name / Generic name	Composition weight %	CAS Registry No.	Hazard Class (category)	Hazard statement
2-Pentanone, 4-methyl-	25 ~ 35	108-10-1	Flam. Liq. 2 Acute Tox.(inhal.) 4 Eye Irrit. 2 STOT. SE. 3	H225 H332 H319 H335
Acetic acid, butyl ester	25 ~ 35	123-86-4	Flam. Liq. 3 STOT. SE. 3	H226 H336
1-Butanol, 3-methyl-, 1-acetate	10 ~ 20	123-92-2	Flam. Liq. 3	H226
Synthetic resin	1 ~ 10	Confidential	none	none
Organic pigment	1 ~ 10	Confidential	none	none
Additive	10 ~ 20	Confidential	none	none
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, remove by absorbing with absorbents (sawdust, soil, sand, waste cloth, etc.), and then wipe off the waste well with waste cloth, and rag.

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

## **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 and personal protection**

### **8.1. Control parameters**

Australian exposure standards(2018)

2-Pentanone, 4-methyl- TWA 50 ppm

Acetic acid, butyl ester TWA 150 ppm

1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

EH40/2005 Workplace exposure limits (Second edition, published 2011)

2-Pentanone, 4-methyl- TWA 50 ppm

Acetic acid, butyl ester TWA 150 ppm

ACGIH (2019)

2-Pentanone, 4-methyl- STEL 20 ppm

Acetic acid, butyl ester TWA 50 ppm

1-Butanol, 3-methyl-, 1-acetate TWA 50 ppm

### **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 : minor solvent odour
- pH : Not applicable
- Boiling point : 114 ~ 142°C
- Flash point : 21°C (closed cup)
- Relative Density (at 25°C) : 0.8 ~ 0.9 (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
- |                                   |      |                  |         |
|-----------------------------------|------|------------------|---------|
| [2-Pentanone, 4-methyl-]          |      |                  |         |
| Oral-rat                          | LD50 | >2,000 - <=5,000 | mg/kg   |
| Dermal-rabbit                     | LD50 | >5,000           | mg/kg   |
| Inhalation-rat                    | LC50 | >10 - <=20       | mg/L/4h |
| [Acetic acid, butyl ester ]       |      |                  |         |
| Oral-rat                          | LD50 | >5,000           | mg/kg   |
| Dermal-rabbit                     | LD50 | >5,000           | mg/kg   |
| [1-Butanol, 3-methyl-, 1-acetate] |      |                  |         |
| Oral-rat                          | LD50 | >5,000           | mg/kg   |
| Dermal-rabbit                     | LD50 | >5,000           | mg/kg   |
- Eye irritation** : Category 2A Causes serious eye irritation
- Specific target organ toxicity (single exposure)** : Category 3 May cause respiratory irritation  
May cause drowsiness or dizziness
- Carcinogenicity** : 2-Pentanone, 4-methyl- has been classified by the IARC as Group 2B.  
Other materials ; Not contain any component that is considered a human carcinogen by IARC, ACGIH, EPA, EU or 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**

Determination of whether a Dangerous Good based on ADG Code criteria.  
 UN Numbers listed as "UN" followed by 4 digits.  
 Dangerous Good Classes and Labels for all Dangerous Goods.  
 Special Provisions listed.  
 Road – ADG – Australian Dangerous Goods Code (Road and Rail)  
 Air – IATA – International Air Transport Association  
 Sea – IMDG – International Maritime Dangerous Goods

- 14.1. UN number ADG, IMDG, IATA : UN1210
- 14.2. UN proper shipping name ADG, IMDG, IATA : PRINTING INK, flammable
- 14.3. Transport hazard class(es) ADG, IMDG, IATA :
  - Class 3 (Flammable liquids)
  - Label 3
- 14.4. Packing group ADG, IMDG, IATA : II
- 14.5. Environmental hazards Marine pollutant : No
- 14.6. Special precautions for user EMS Number : F-E,S-D
- 14.7. HAZCHEM Code : 3YE (ADG7)



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Artline WHITEBOARD MARKER (EK-500, EK-509) is not a hazardous material by the special provision.

Artline WHITEBOARD MARKER (EK-500, EK-509) (The amount of ink : less than 10ml)

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

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

**SECTION 15: Regulatory information**

This product does not contain any hazardous chemical that has been determined by Montreal Protocol (Ozone depleting substances), The Stockholm Convention (Persistent Organic Pollutants), and The Rotterdam Convention (Prior Informed Consent).

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
- 15.2. Chemical safety assessment
  - No Chemical Safety Assessment has been carried out for this mixture by the supplier.

**SECTION 16: Other information**

**References**

Model Code of Practice	Preparation of Safety Data Sheets for Hazardous Chemicals Labelling of Workplace Hazardous Chemicals National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)]
GHS	Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Safe Work Australia HSIS	<a href="http://hsis.safeworkaustralia.gov.au/HazardousSubstance">http://hsis.safeworkaustralia.gov.au/HazardousSubstance</a>
WES	Workplace Exposure Standards for Airborne Contaminants (2018)
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, National Transport Commission. (ADG7)



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.

EU RoHS (Directive 2011/65/EU, DIRECTIVE (EU) 2015/863)  
EU ELV (DIRECTIVE 2000/53/EC)