

SAFETY DATA SHEET

According to Regulation (EU) No.1907/2006, Regulation (EU) No. 1272/2008 and their subsequent amendments and corrigenda

Version: 1.0
Creation Date: Sept. 17, 2020
Revision Date: Sept. 17, 2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name FD-1 series fountain pen ink
Other means of identification
Other names Water,purified; Water vapor; Distilled water
Product number -

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

Identified uses Ink for pen
Uses advised against no data available
Reason why uses advised against no data available

1.3. Details of the supplier of the safety data sheet

Details of the supplier
Company ZEBRA CO., LTD
Address 2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN
Telephone TEL +81-3-3268-1193 FAX +81-3-3268-1197
For Emergency +81-3-3266-1193 (This phone number is available only during office hours: 9 am to half past 5 pm (Japan time))

1.4. Emergency telephone number

Emergency telephone number +81-3-3266-1193
Opening hours (This phone number is available only during office hours: 9 am to half past 5 pm (Japan time))

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****2.1.1. Classification according to Regulation (EC) No 1272/2008 (CLP)**

Acute Tox. 4,H302
Aquatic Acute 1,H400

2.1.2. Additional information

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008 [CLP]****Pictogram(s)****Signal word**

Warning

Hazard statement(s)

H302 Harmful if swallowed.
H400 Very toxic to aquatic life.

Precautionary statement(s)

P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P330 Rinse mouth.
P391 Collect spillage.
P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell.

Supplemental Hazard information (EU)

no data available

2.3. Other hazards

no data available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Item Numbers: 82114-1679, 82114-2026, 82114-3016, 82114-3066, 82114-5016, 82114-5116, 82114-6006, 82114-7016
FD-1 series fountain pen ink

Chemical name	Common names and synonyms	CAS number	EC number	Registration number	Classification according to Regulation (EC)No 1278/2008(CLP)	Concentration
Water	water	7732-18-5	231-791-2	-	Not classified.	>60%
Ethane-1,2-diol	ethylene glycol	107-21-1	203-473-3	-	Acute Tox. 4,H302	<10%
1,2-benzisothiazol-3(2H)-one	1,2-benzisothiazolin-3-one	2634-33-5	220-120-9	-	Acute Tox. 4,H302;Skin Irrit. 2,H315;Eye Dam. 1,H318;Skin Sens. 1,H317;Aquatic Acute 1,H400	<0.05%

SECTION 4: First aid measures

4.1. Description of first aid measures

General notes

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

Following inhalation

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

In case of skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

In case of eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2. Most important symptoms and effects, both acute and delayed

no data available

4.3. Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

5.2. Special hazards arising from the substance or mixture

no data available

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3. Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

6.4. Reference to other sections

For disposal suggestions see section 13. For exposure controls / personal protection suggestions see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

7.3. Specific end use(s)

Main uses of the chemical are mentioned in section 1.2. No other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure limit values

Component	ethylene glycol			
CAS No.	107-21-1			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³
Finland	20	50	40 (1)	100 (1)
Sweden	10	25	40 (1)	104 (1)
Turkey	20	52	40 (1)	104 (1)
	Remarks			
Finland	(1) 15 minutes average value			
Sweden	(1) 15 minutes average value			
Turkey	(1) 15 minutes average value			

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.2.2. Individual protection measures, such as personal protective equipment

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

8.2.3. Environmental exposure controls

See section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Odour	no data available
Odour threshold	no data available
pH	no data available
Melting point/freezing point	pure CAS 7732-18-5: 0 °C; pure CAS 107-21-1: -13°C; pure CAS 2634-33-5: 136°C(lit.)
Initial boiling point and boiling range	pure CAS 7732-18-5: 100°C(lit.); pure CAS 107-21-1: 197°C; pure CAS 2634-33-5: 75°C/13mmHg(lit.)
Flash point	pure CAS 7732-18-5: 100°C; pure CAS 107-21-1: 111.11°C c.c., 115°C o.c.; pure CAS 2634-33-5: 67°C(lit.)
Evaporation rate	no data available
Flammability	pure CAS 107-21-1: Combustible.
Upper/lower flammability or explosive limits	no data available
Vapour pressure	pure CAS 7732-18-5: 3 mm Hg (37 °C); pure CAS 107-21-1: 6.5 Pa(20°C); pure CAS 2634-33-5: 0.183mmHg at 25°C
Vapour density	pure CAS 7732-18-5: <1 (vs air); pure CAS 107-21-1: 2.1 (vs air)
Relative density	pure CAS 7732-18-5: 1.000g/mL at 3.98°C(lit.); pure CAS 107-21-1: 1.1; pure CAS 2634-33-5: 1.367g/cm ³
Solubility(ies)	pure CAS 107-21-1: Solubility in water: miscible; pure CAS 2634-33-5: 21.7 [ug/mL]
Partition coefficient n-octanol/water	pure CAS 107-21-1: -1.36; pure CAS 2634-33-5: log Kow = 0.76 at 30 deg C and pH 7
Auto-ignition temperature	pure CAS 107-21-1: 398°C
Decomposition temperature	no data available

Explosive properties

pure CAS 107-21-1: dynamic viscosity (in mPa s) = 16.1. Temperature: 25.0 °C.; dynamic viscosity (in mPa s) = 6.554. Temperature: 50 °C.; dynamic viscosity (in mPa s) = 3.34. Temperature: 75 °C.

Oxidising properties

pure CAS 107-21-1: Lower explosive (flammable) limit in air (LEL), 3.2%; upper explosive (flammable) limit in air (UEL), 15.3%.
no data available

9.2. Other information

no data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

no data available

10.2. Chemical stability

no data available

10.3. Possibility of hazardous reactions

no data available

10.4. Conditions to avoid

no data available

10.5. Incompatible materials

no data available

10.6. Hazardous decomposition products

no data available

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

- Oral: pure CAS 107-21-1: LD50 - rat (male/female) - 7 712 mg/kg bw.; pure CAS 2634-33-5: LD50 Rat oral 1020 mg/kg
- Inhalation: pure CAS 107-21-1: LC50 - rat (male/female) - > 2.5 mg/L air.
- Dermal: pure CAS 107-21-1: LD50 - mouse (male/female) - > 3 500 mg/kg bw.

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

pure CAS 107-21-1: The substance is irritating to the eyes and respiratory tract. The substance may cause effects on the kidneys, central nervous system and acid-base balance in the body. This may result in renal failure, brain injury and metabolic acidosis. Exposure could cause lowering of consciousness.

STOT-repeated exposure

no data available

Aspiration hazard

pure CAS 107-21-1: A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

SECTION 12: Ecological information**12.1. Toxicity**

- Toxicity to fish: pure CAS 107-21-1: LC50 - Pimephales promelas - > 72 860 mg/L - 96 h.; pure CAS 2634-33-5: LC50; Species: Lepomis macrochirus (Bluegill) length 29 mm; Conditions: freshwater, flow through; Concentration: 540 ug/L for 96 hr (95% confidence interval: 350-820 ug/L) /93.2% purity
- Toxicity to daphnia and other aquatic invertebrates: pure CAS 107-21-1: EC50 - Daphnia magna - > 100 mg/L - 48 h.; pure CAS 2634-33-5: EC50; Species: Daphnia magna (Water Flea) age <24 hr; Conditions: freshwater, flow through; Concentration: 3700 ug/L for 48 hr (95% confidence interval: 2900-4600 ug/L); Effect: intoxication, immobilization /89.8% purity

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

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

14.1. UN Number

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

14.2. UN Proper Shipping Name

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

14.3. Transport hazard class(es)

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

14.4. Packing group

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

14.5. Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

14.6. Special precautions for user

no data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

no data available

SECTION 15: Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
Water	water	7732-18-5	231-791-2
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Ethane-1,2-diol	ethylene glycol	107-21-1	203-473-3
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
1,2-benzisothiazol-3(2H)-one	1,2-benzisothiazolin-3-one	2634-33-5	220-120-9
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Version 1.0

Initial issue.

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

Key literature references and sources for data

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Full text of H-Statements referred to under sections 2 and/or 3.

Acute Tox. 4,H302	Acute toxicity - Oral, Category 4
Aquatic Acute 1,H400	Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
H302	Harmful if swallowed.
H400	Very toxic to aquatic life.

Advice on any training appropriate for workers to ensure protection of human health and the environment

Provide sufficient information, guidance and training to operating personnel.

Any questions regarding this SDS, Please send your inquiry to sds@xixisys.com

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.