SAFETY DATA SHEETS

According to (EU) No. 1907/2006, (EU) No. 1272/2008 and their amendments (including (EU) No. 2020/878) and corrigenda

Version: 1.0
Creation Date: Jan. 23, 2024
Revision Date: Jan. 23, 2024

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

1.1. Product identifier

Product name	Ballpen ink
Nanoform	not applicable
Other means of identification	
Other names	-
Product number	-
Unique formula identifier (UFI)	AS9V-CEJC-1SKG-U6KH

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

Relevant identified uses	For the manufacture of writing instruments
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	suzhou xiongying ink
Address	suhzou city
Telephone	+86-512-63331385
Details of the non-Community manufacturer or formulator	
Company	suzhou xiongying ink technology co.ltd
Address	yunli road No.539wujiang economic development zone suzhou city
Telephone	+86-512-63331385
E-mail address of competent person responsible for the SDS	zhangshenghong001@126.com

1.4. Emergency telephone number

Emergency telephone number	+86-512-63331385
Opening hours	Monday to Friday, 9 am-5 pm (Standard time zone: UTC/GMT+8 hours).

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
Acute Tox. 4,H332

2.1.2. Additional information

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

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictogram(s)

Signal word Warning

Hazard statement(s)	H302 Harmful if swallowed. H332 Harmful if inhaled.
Precautionary statement(s)	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash … thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P312 Call a POISON CENTRE/doctor/… if you feel unwell. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor/… if you feel unwell. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Supplemental Hazard information	no data available

2.3. Other hazards

no data available

SECTION 3: Composition/information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Chemical name	Common names and synonyms	CAS number	EC number	Registration number	Classification according to Regulation (EC)No 1278/2008(CLP)	% [weight]	SCL, M-factor, ATE
Benzyl alcohol	Benzy1 alcohol	100-51-6	202-859-9	-	Acute Tox. 4,H302;Acute Tox. 4,H332	35.00%-55%	-
[Name confidential or not available]	Keton resin	25054-06-2	607-515-5	-	Not classified.	10.00%-25%	-
-	dye	655113-55-5	-	-	no data available	15%-25%	-
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0	-	Not classified.	5.00%-15%	-
2,2',2"-nitrilotriethanol	Triethanolamine	102-71-6	203-049-8	-	Not classified.	1%-5.00%	-

Additional information for nanoforms

no data available

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

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Refer for medical attention .

Self-protection of the first aider

Wear protective equipment. Consult a doctor.

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

Inhalation of vapor may cause irritation of upper respiratory tract. Prolonged or excessive inhalation may result in headache, nausea, vomiting, and diarrhea. In severe cases, respiratory stimulation followed by respiratory and muscular paralysis, convulsions, narcosis and death may result. Ingestion may produce severe irritation of the gastrointestinal tract, followed by nausea, vomiting, cramps and diarrhea; tissue ulceration may result. Contact with eyes causes local irritation. Material can be absorbed through skin with anesthetic or irritant effect. (USCG, 1999)

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

Enhancement of elimination: Hemodialysis may enhance the elimination of benzyl alcohol and its metabolites and may also be useful to help correct severe metabolic acidosis. However, more cases involve prolonged repeated infusion, and the usefulness of dialysis in unknown.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Suitable extinguishing media

Foam, carbon dioxide, dry chem ...

Unsuitable extinguishing media

no data available

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Combustible.

5.3. Advice for firefighters

Use powder, AFFF, foam, carbon dioxide.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.

6.2. Environmental precautions

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.

6.3. Methods and materials for containment and cleaning up

SRP: Wastewater from contaminant suppression, cleaning of protective clothing/equipment, or contaminated sites should be contained and evaluated for subject chemical or decomposition product concentrations. Concentrations shall be lower than applicable environmental discharge or disposal criteria. Alternatively, pretreatment and/or discharge to a POTW is acceptable only after review by the governing authority. Due consideration shall be given to remediation worker exposure (inhalation, dermal and ingestion) as well as fate during treatment, transfer and disposal. If it is not practicable to manage the chemical in this fashion, it must meet Hazardous Material Criteria for disposal.

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

NO open flames.

7.2. Conditions for safe storage, including any incompatibilities

Separated from strong oxidants.

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

MAK: 22 mg/m3, 5 ppm; peak limitation category: I(2); skin absorption (H); pregnancy risk group: C

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

Physical state	Liquid.
Colour	pure CAS 100-51-6: Not reported.;pure CAS 102-71-6: Colorless to Pale-yellow.
Odour	pure CAS 100-51-6: Faint aromatic odor;pure CAS 102-71-6: Slight ammonical odor
Melting point/freezing point	pure CAS 100-51-6: -15°C;pure CAS 102-71-6: 21.6°C
Boiling point or initial boiling point and boiling range	pure CAS 100-51-6: 205°C;pure CAS 25054-06-2: 155.7ºC at 760mmHg;pure CAS 102-71-6: 335.4°C
Flammability	pure CAS 100-51-6: Combustible.;pure CAS 102-71-6: Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit	no data available
Flash point	pure CAS 100-51-6: 93°C c.c.;pure CAS 25054-06-2: 46.7ºC;pure CAS 102-71-6: 179°C
Auto-ignition temperature	pure CAS 100-51-6: 436°C;pure CAS 102-71-6: 324°C
Decomposition temperature	no data available
pH	pure CAS 102-71-6: pH = 10.5 (0.1 N aqueous solution); strong base
Kinematic viscosity	pure CAS 100-51-6: dynamic viscosity (in mPa s) = 5.05. Temperature:25.0°C.;pure CAS 102-71-6: kinematic viscosity (in mm^2/s) = 830.2. Temperature:20°C.;kinematic viscosity (in mm^2/s) = 181.5. Temperature:40°C.;kinematic viscosity (in mm^2/s) = 59.1. Temperature:60.0°C.
Solubility	pure CAS 100-51-6: Solubility in water, g/100ml: 4 ;pure CAS 102-71-6: Solubility in water: miscible
Partition coefficient n-octanol/water	pure CAS 100-51-6: 1.1;pure CAS 102-71-6: -2.3 (not explosive)
Vapour pressure	pure CAS 100-51-6: 13.2 Pa(20°C);pure CAS 102-71-6: <1 Pa(25°C)
Density and/or relative density	pure CAS 100-51-6: 1.04;pure CAS 24969-06-0: 1.36 g/mL at 25 °C(lit.);pure CAS 102-71-6: 1.1
Relative vapour density	pure CAS 100-51-6: 3.7 (vs air);pure CAS 102-71-6: 5.14 (vs air)
Particle characteristics	no data available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

no data available

9.2.2. Other safety characteristics

no data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with strong oxidants. Attacks some forms of plastic. On combustion, forms toxic gases including carbon monoxide.

10.2. Chemical stability

Oxidizes slowly, therefore remains stable for long time

10.3. Possibility of hazardous reactions

Reacts with strong oxidants. Attacks some forms of plastic. On combustion, forms toxic gases including carbon monoxide.

10.4. Conditions to avoid

no data available

10.5. Incompatible materials

Mixtures with sulfuric acid decompose expliosively at 180 deg C.

10.6. Hazardous decomposition products

When heated to decomposition it emits acrid smoke and fumes.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

- Oral: pure CAS 100-51-6: LD50 - rat (male) - 1.55 mL/kg bw. Remarks:Corresponding to 1620 mg/kg bw (density: 1.045 g/mL).;pure CAS 102-71-6: LD50 - rat (male/female) - 6 400 mg/kg bw.
- Inhalation: pure CAS 100-51-6: LC50 - rat (male/female) - > 4 178 mg/m^3 air.;pure CAS 102-71-6: LC0 - rat (male/female) - saturated TEA atmosphere (approximately 1.8 mg/m^3).
- Dermal: pure CAS 100-51-6: LD50 - guinea pig - < 5 000 mg/kg bw.;pure CAS 102-71-6: LD50 - rabbit - > 2 000 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

Summary of evaluation of the CMR properties

no data available

STOT-single exposure

pure CAS 100-51-6: The aerosol is irritating to the eyes and skin. The substance may cause effects on the nervous system.;pure CAS 102-71-6: The substance is irritating to the eyes, skin and respiratory tract.

STOT-repeated exposure

pure CAS 100-51-6: Repeated or prolonged contact may cause skin sensitization.;pure CAS 102-71-6: Repeated or prolonged contact may cause skin sensitization.

Aspiration hazard

pure CAS 100-51-6: No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.;pure CAS 102-71-6: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

no data available

11.2.2. Other information

no data available

SECTION 12: Ecological information

12.1. Toxicity

- Toxicity to fish: pure CAS 100-51-6: LC50 - Pimephales promelas - 460 mg/L - 96 h.;pure CAS 102-71-6: LC50 - Pimephales promelas - 11 800 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: pure CAS 100-51-6: EC50 - Daphnia magna - 230 mg/L - 48 h.;pure CAS 102-71-6: EC50 - Ceriodaphnia dubia - 609.88 mg/L - 48 h.
- Toxicity to algae: pure CAS 100-51-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 770 mg/L - 72 h.;pure CAS 102-71-6: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 512 mg/L - 72 h.
- Toxicity to microorganisms: pure CAS 100-51-6: IC50 - Aerobic heterotrophs and Nitrosomonas - 2 100 mg/L - 49 h. Remarks:Respiration rate.;pure CAS 102-71-6: IC50 - activated sludge of a predominantly domestic sewage - > 1 000 mg/L - 3 h. Remarks:Respiration rate.

12.2. Persistence and degradability

AEROBIC: Benzyl alcohol underwent 70% of theoretical biological oxygen demand in 5 days under aerobic conditions using an acclimated mixed microbial culture(1). At an initial concentration of 250 ppm, benzyl alcohol achieved 29% of the theoretical BOD after 12 hours in a sewage sludge acclimated to this compound, and 31% oxidation in a sludge acclimated to mandelic acid(2). At an initial concentration of 500 ppm, it achieved 52%, 42%, and 43% of the theoretical BOD in 12 hours using a settled sewage sludge acclimated to phenol, benzoic acid, and catechol, respectively(2). It is listed as a synthetic organic chemical easily biodegradable by biological sewage treatment(3). Benzyl alcohol at an initial concentration of 500 mg/L was shown to undergo rapid oxygen uptake under aerobic conditions when inoculated with municipal sewage sludge(4,5). Benzyl alcohol achieved 48% of the theoretical BOD in 5 days using a sewage sludge seed(6). Benzyl alcohol underwent 60.8% degradation using an industrial sludge inoculum under aerobic conditions in 5 days(7). Benzyl alcohol, present at 100 mg/L, reached 94% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(8). An experimentally-derived first-order aerobic biodegradation rate constant of 0.05 days was reported(9), corresponding to a half-life of about 13 days(SRC).

12.3. Bioaccumulative potential

An estimated BCF of 1.4 was calculated in fish for benzyl alcohol(SRC), using a log Kow of 1.10(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

12.4. Mobility in soil

Experimental Koc values for benzyl alcohol were <5 for three different soils; Apison (0.11% organic carbon), Fullerton (0.06% organic carbon), and Dormont (1.2% organic carbon)(1). An experimental Koc of 15 was determined for benzyl alcohol on a red-brown Australian soil (1.09% organic carbon)(2,3). A log Koc of 1.43 has also been reported(4). According to a classification scheme(5), these Koc values suggest that benzyl alcohol is expected to have very high mobility in soil.

12.5. Results of PBT and vPvB assessment

no data available

12.6. Endocrine disrupting properties

no data available

12.7. 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 or ID 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: No IMDG: No IATA: No

14.6. Special precautions for user

no data available

14.7. Maritime transport in bulk according to IMO instruments

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
Benzyl alcohol	Benzy1 alcohol	100-51-6	202-859-9
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.

Chemical name	Common names and synonyms	CAS number	EC number
[Name confidential or not available]	Keton resin	25054-06-2	607-515-5
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.

Chemical name	Common names and synonyms	CAS number	EC number
-	dye	655113-55-5	-
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.

Chemical name	Common names and synonyms	CAS number	EC number
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.

Chemical name	Common names and synonyms	CAS number	EC number
2,2',2"-nitrilotriethanol	Triethanolamine	102-71-6	203-049-8
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

Indication of changes

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 Classification and Hazard-statements referred to under sections 2

Acute Tox. 4, H302	Acute toxicity - Oral, Category 4
Acute Tox. 4, H332	Acute toxicity - Inhalation, Category 4
H302	Harmful if swallowed.
H332	Harmful if inhaled.

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.
