

SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0
Creation Date: Sept. 18, 2018
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1. Identification

1.1 GHS Product identifier

Product name Marker Pen Inks

1.2 Other means of identification

Product number YL-M000

Other names

1.3 Recommended use of the chemical and restrictions on use

Identified uses Inks for writing instruments

Uses advised against no data available

1.4 Supplier's details

Company Hangzhou Yulin Digital Device Co. Ltd.

Address Address: Suite 3008, 9 Yan An Nan Lu, Hangzhou, Zhejiang, China.

Telephone 086-571-8770-3016, 086-571-8770-3017

Fax 086-571-8770-3017

1.5 Emergency phone number

Emergency phone number 086-571-8770-3016

Service hours Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

2. Hazard identification

2.1 Classification of the substance or mixture

Flammable liquids, Category 2

Eye irritation, Category 2

Skin sensitization, Category 1

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour
H319 Causes serious eye irritation
H317 May cause an allergic skin reaction

Precautionary statement(s)

Prevention
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242 Use non-sparking tools.

Response

P243 Take action to prevent static discharges.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P264 Wash ... thoroughly after handling.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P370+P378 In case of fire: Use ... to extinguish.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P302+P352 IF ON SKIN: Wash with plenty of water/...
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P321 Specific treatment (see ... on this label).
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Storage
Disposal****2.3 Other hazards which do not result in classification**

no data available

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

Not applicable

3.2 Mixtures

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Rosin	Modified Rosin	8050-09-7	232-475-7	10%
Propan-2-ol	Isopropanol	67-63-0	200-661-7	10%
Ethanol	Ethyl Alcohol	64-17-5	200-578-6	complimentary
	Colorants			see attachment for details

4. First-aid measures**4.1 Description of necessary first-aid measures****General advice**

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

If inhaled

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.

Following skin contact

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

Following eye contact

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

Following ingestion

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/effects, acute and delayed

no data available

4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Specific hazards arising from the chemical

no data available

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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.

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.

7.2 Conditions for safe storage, including any incompatibilities

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

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

Component	Rosin			
CAS No.	8050-09-7			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³

Component	Rosin			
CAS No.	8050-09-7			
Canada - Ontario		(1)		
Canada - Québec		0,1		
Israel		0,05		0,15 (1)
Latvia		4		
New Zealand		(1)		
United Kingdom		0,05		0,15
	Remarks			
Canada - Ontario	(1) Exposure by all routes should be carefully controlled to levels as low as possible.			
Israel	(1) 15 minutes average value			
New Zealand	(1) Reduce to the lowest practicable level			

Component	Isopropanol			
CAS No.	67-63-0			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³
Australia	400	983	500	1230
Austria	200	500	800	2000
Belgium	200	500	400	1000
Canada - Ontario	200		400	
Canada - Québec	400	983	500	1230
Denmark	200	490	400	980
Finland	200	500	250 (1)	620 (1)
France			400	980
Germany (AGS)	200	500	400 (1)	1000 (1)
Germany (DFG)	200	500	400	1000
Hungary		500		2000
Ireland	200		400 (1)	
Japan	400			
Japan - JSOH	400 (1)	980 (1)		
Latvia		350		600 (1)
New Zealand	400	983	500	1230
People's Republic of China		350		700 (1)
Poland		900		1200
Singapore	400	983	500	1230
South Korea	200	480	400	980
Spain	200	500	400	1000
Sweden	150	350	250 (1)	600 (1)
Switzerland	200	500	400	1000

Component	Isopropanol			
CAS No.	67-63-0			
USA - NIOSH	400	980	500 (1)	1225 (1)
USA - OSHA	400	980		
United Kingdom	400	999	500	1250
	Remarks			
Finland	(1) 15 minutes average value			
Germany (AGS)	(1) 15 minutes average value			
Germany (DFG)	STV 15 minutes average value			
Ireland	(1) 15 minutes reference period			
Japan - JSOH	(1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day			
Latvia	(1) 15 minutes average value			
People's Republic of China	(1) 15 minutes average value			
Sweden	(1) 15 minutes average value			
USA - NIOSH	(1) 15 minutes average value			

Component	Ethanol			
CAS No.	64-17-5			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³
Australia	1000	1880		
Austria	1000	1900	2000	3800
Belgium	1000	1907		
Canada - Ontario			1000	
Canada - Québec	1000	1880		
Denmark	1000	1900	2000	3800
Finland	1000	1900	1300 (1)	2500 (1)
France	1000	1900	5000	9500
Germany (AGS)	500	960	1000 (1)	1920 (1)
Germany (DFG)	500	960	1000 (1)	1920 (1)
Hungary		1900		7600
Ireland			1000 (1)	
Latvia		1000		
New Zealand	1000	1880		
Poland		1900		
Singapore	1000	1880		
South Korea	1000	1900		
Spain			1000	1910
Sweden	500	1000	1000 (1)	1900 (1)
Switzerland	500	960	1000	1920
The Netherlands		260		1900
USA - NIOSH	1000	1900		

Component	Ethanol			
CAS No.	64-17-5			
USA - OSHA	1000	1900		
United Kingdom	1000	1920		
	Remarks			
Finland	(1) 15 minutes average value			
Germany (AGS)	(1) 15 minutes average value			
Germany (DFG)	(1) 15 minutes average value			
Ireland	(1) 15 minutes reference period			
Sweden	(1) 15 minutes average value			

8.2 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.

8.3 Individual protection measures, such as personal protective equipment (PPE)

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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

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

Thermal hazards

no data available

9. Physical and chemical properties

Physical state	Liquid.
Colour	pure CAS 67-63-0: Colorless liquid; pure CAS 64-17-5: Colourless.
Odour	pure CAS 67-63-0: Pleasant odor; pure CAS 64-17-5: Mild, rather pleasant; like wine or whiskey
Melting point/ freezing point	pure CAS 7732-18-5: 0 °C; pure CAS 8050-09-7: 100 - 140°C; pure CAS 67-63-0: -89.5 °C.; pure CAS 64-17-5: -114 °C. Atm. press.: 1 atm.
Boiling point or initial boiling point and boiling range	100
Flammability	pure CAS 67-63-0: Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.; pure CAS 64-17-5: Class IB Flammable Liquid: Fl.P. below 73°F and BP at or above 100°F.
Lower and upper explosion limit / flammability limit	pure CAS 67-63-0: Lower flammable limit: 2.0% by volume; Upper flammable limit: 12.7% by volume @ 200 deg F (93 deg C); pure CAS 64-17-5: Lower flammable limit: 3.3% by volume; Upper flammable limit: 19% by volume
Flash point	pure CAS 7732-18-5: 100°C; pure CAS 8050-09-7: 188°C; pure CAS 67-63-0: 12 °C.; pure CAS 64-17-5: 13 °C. Atm. press.: 1 atm.
Auto-ignition temperature	pure CAS 67-63-0: 399 °C. Remarks: The pressure was not reported.; pure CAS 64-17-5: 368.8 °C. Remarks: 368.8 +/- 7.4°C.
Decomposition temperature	
pH	

Kinematic viscosity	pure CAS 67-63-0: 2.038 mPa s at 25 deg C; pure CAS 64-17-5: dynamic viscosity (in mPa s) = 1.17. Temperature: 20°C. Remarks: Value attributed to Kirk Othmer.
Solubility	pure CAS 67-63-0: Miscible with water; pure CAS 64-17-5: Miscible with water
Partition coefficient n-octanol/water	pure CAS 67-63-0: log Pow = 0.05. Temperature: 25 °C. Remarks: PH not reported.; pure CAS 64-17-5: log Pow = -0.35. Temperature: 24 °C.
Vapour pressure	pure CAS 7732-18-5: 3 mm Hg (37 °C); pure CAS 67-63-0: 60.2 hPa. Temperature: 25 °C. Remarks: 6.02 kPa at 25°C.; pure CAS 64-17-5: 57.26 hPa. Temperature: 19.6 °C.
Density and/or relative density	pure CAS 7732-18-5: 1.000g/mL at 3.98°C (lit.); pure CAS 8050-09-7: 1.07~1.09; pure CAS 67-63-0: 0.8.; pure CAS 64-17-5: 786.4 kg/m³. Temperature: 25 °C.
Relative vapour density	pure CAS 7732-18-5: <1 (vs air); pure CAS 67-63-0: 2.1 (vs air); pure CAS 64-17-5: 1.59 (vs air)
Particle characteristics	no data available

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

11. Toxicological information

Acute toxicity

- Oral: pure CAS 67-63-0: LD50 Dog oral 4797 mg/kg; pure CAS 64-17-5: LD50 - rat (female) - 15 010 mg/kg bw.
- Inhalation: pure CAS 67-63-0: LC50 Mouse inhalation 53 mg/L 2 hr; pure CAS 64-17-5: LC50 - mouse (male) - > 60 000 ppm.
- Dermal:

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

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information**12.1 Toxicity**

- Toxicity to fish: pure CAS 67-63-0: LC50; Species: Lepomis macrochirus (Bluegill) length 40-50 mm; Conditions: static, 22 deg C; Concentration: >1400000 ug/L for 24-96 hr /formulation; pure CAS 64-17-5: LC50 - Pimephales promelas - 14.2 g/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: pure CAS 67-63-0: EC50 - Daphnia magna - > 10 000 mg/L - 24 h.; pure CAS 64-17-5: LC50 - Ceriodaphnia dubia - 5 012 mg/L - 48 h.
- Toxicity to algae: pure CAS 67-63-0: Toxicity threshold - Scenedesmus quadricauda - 1 800 mg/L - 7 d.; pure CAS 64-17-5: EC10 - Chlorella vulgaris - 86 mg/L - 4 d.
- Toxicity to microorganisms: pure CAS 64-17-5: IC50 - activated sludge from domestic and industrial sewage treatment plants - > 1 000 mg/L - 3 h.

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 Other adverse effects

no data available

13. Disposal considerations**13.1 Disposal 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.

14. Transport information**14.1 UN Number**

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.2 UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.3 Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.4 Packing group, if applicable

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

15. Regulatory information**15.1 Safety, health and environmental regulations specific for the product in question**

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)			Not Listed.
EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Rosin	Rosin	8050-09-7	232-475-7
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Propan-2-ol	Isopropanol	67-63-0	200-661-7
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.

EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Ethanol	Ethanol	64-17-5	200-578-6
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.

16. Other information

Information on revision

Creation Date Sept. 18, 2018

Revision Date Sept. 18, 2018

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%

References

- 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/>

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.