

# SAFETY DATA SHEETS

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

Version: 1.0  
Creation Date: Mar. 24, 2022  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 – Product identifier

Product name : INK for Z- Grip BP RED

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

- Use of the substance/mixture : Ink for writing implement
- Recommended restrictions on use : No information available
- Uses Advised Against : No information available

### 1.3 – Details of the supplier of the SDS

• Importer : ZEBRA PEN (UK) LTD  
Unit 2, Hook Rise Business Centre,  
Hook Rise South, Surbiton, Surrey KT6 7LD, UK

TEL : 44 208 974 2202  
FAX : 44 208 974 2131

• Manufacture : ZEBRA CO., LTD.  
2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN

TEL : +81-3-3268-1193  
FAX : +81-3-3268-1197

### 1.4 – Emergency telephone number

- Importer : +44 208 974 2202
- Manufacture : +81-3-3268-1193

This phone number is available only during office hours: 9 a.m. to half past 5 p.m.  
(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  
Skin Corr. 1,H314  
Eye Dam. 1,H318  
Aquatic Chronic 2,H411

#### 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

Danger

<b>Hazard statement(s)</b>	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H411 Toxic to aquatic life with long lasting effects.
<b>Precautionary statement(s)</b>	P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P310 Immediately call a POISON CENTER/doctor/... P391 Collect spillage. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Supplemental Hazard information (EU)</b>	no data available

### 2.3. Other hazards

no data available

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## 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)	Concentration
3',6'-bis(diethylamino)spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3-one	solvent red 49	509-34-2	208-096-8	-	Acute Tox. 4,H302;Eye Irrit. 2,H319;Aquatic Chronic 2,H411	30%
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7	-	Acute Tox. 4,H302;Eye Dam. 1,H318;STOT SE 3,H335	25%
Benzyl alcohol	Benzyl alcohol	100-51-6	202-859-9	-	Acute Tox. 4,H302;Acute Tox. 4,H332	20%
Propane-1,2-diol	Keton resin	57-55-6	200-338-0	-	Not classified.	14%
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0	-	Not classified.	6%
2,2,2"-nitrioltriethanol	Triethanolamine	102-71-6	203-049-8	-	Not classified.	4%
Phosphoric acid, mono- and bis(2-ethylhexyl) esters	Phosphoric acid ester	90506-69-7	291-933-4	-	Skin Corr. 1B,H314	1%

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## 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

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## 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.

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## 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.

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## 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.

### 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.

### 7.3. Specific end use(s)

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

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure limit values

Component	2-Phenoxy Ethanol			
CAS No.	122-99-6			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Austria	20	110	20	110
Canada - Ontario	25	141		
Finland	20	110	50 (1)	290 (1)
Germany (AGS)	20 (1)	110 (1)	40 (1)(2)	220 (1)(2)
Germany (DFG)	1 (1)	5,7 (1)	1 (1)(2)	5,7 (1)(2)
Poland		230		
Switzerland	20	110	40	220
	Remarks			
Finland	(1) 15 minutes average value			
Germany (AGS)	(1) Inhalable aerosol and vapour (2) 15 minutes reference period			
Germany (DFG)	(1) Inhalable fraction and vapour (2) 15 minutes average value			

Component	Benzyl alcohol			
CAS No.	100-51-6			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Finland	10	45		
Germany (DFG)	5 (1)	22 (1)	10 (1)(2)	44 (1)(2)
Latvia		5		

<b>Component</b>	Benzyl alcohol
<b>CAS No.</b>	100-51-6

	<b>Remarks</b>
<b>Germany (DFG)</b>	(1) Inhalable fraction and vapour (2) 15 minutes average value

<b>Component</b>	Keton resin			
<b>CAS No.</b>	57-55-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Australia</b>	150	474		
<b>Canada - Ontario</b>	50	155		
<b>Ireland</b>	150	470		
<b>New Zealand</b>	150 (1)	474		
		10 (1)		
<b>United Kingdom</b>	150	474		
	<b>Remarks</b>			
<b>New Zealand</b>	(1) particulates only			

<b>Component</b>	Triethanolamine			
<b>CAS No.</b>	102-71-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Australia</b>		5		
<b>Austria</b>	0,8	5 inhalable aerosol	0,16	10 inhalable aerosol
<b>Belgium</b>		5		
<b>Canada - Ontario</b>	0,5	3,1		
<b>Canada - Québec</b>		5		
<b>Denmark</b>	0,5	3,1	1	6,2
<b>Finland</b>		5		
<b>Germany (DFG)</b>		5 (1)		10 (1)(2)
<b>Ireland</b>		5		
<b>New Zealand</b>		5		
<b>Singapore</b>		5		
<b>Spain</b>		5		
<b>Sweden</b>	0,8	5	1,6 (1)	10 (1)
<b>Switzerland</b>		5 (1)		10 (1)(2)
	<b>Remarks</b>			
<b>Germany (DFG)</b>	(1) Inhalable fraction (2) 15 minutes average value			
<b>Sweden</b>	(1) 15 minutes average value			
<b>Switzerland</b>	(1) Inhalable fraction (2) 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.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Odour</b>	pure CAS 122-99-6: Faint aromatic odor; pure CAS 100-51-6: Faint aromatic odor; pure CAS 57-55-6: Practically odorless; pure CAS 102-71-6: Slight ammoniacal odor
<b>Odour threshold</b>	pure CAS 100-51-6: 5.5 ppm
<b>pH</b>	pure CAS 509-34-2: 7.58.; pure CAS 100-51-6: A solution in water is neutral to litmus; pure CAS 102-71-6: pH = 10.5 (0.1 N aqueous solution); strong base
<b>Melting point/freezing point</b>	pure CAS 509-34-2: >= 139 - <= 141.1 °C. Atm. press.: 978.8 hPa.; pure CAS 122-99-6: 14°C; pure CAS 100-51-6: -15°C; pure CAS 57-55-6: -59°C; pure CAS 102-71-6: 21.6°C
<b>Initial boiling point and boiling range</b>	pure CAS 509-34-2: > 340 °C. Atm. press.: 978.4 hPa. Remarks: No other details available.; pure CAS 122-99-6: 245°C; pure CAS 100-51-6: 205°C; pure CAS 57-55-6: 188.2°C; pure CAS 102-71-6: 335.4°C
<b>Flash point</b>	pure CAS 509-34-2: 190.6 °C. Atm. press.: 979.2 hPa.; pure CAS 122-99-6: 127°C c.c.; pure CAS 100-51-6: 93°C c.c.; pure CAS 57-55-6: 101°C c.c.; pure CAS 102-71-6: 179°C
<b>Evaporation rate</b>	no data available
<b>Flammability</b>	pure CAS 122-99-6: Combustible.; pure CAS 100-51-6: Combustible.; pure CAS 57-55-6: Combustible.; pure CAS 102-71-6: Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
<b>Upper/lower flammability or explosive limits</b>	pure CAS 57-55-6: Lower flammable limit: 2.6% by volume; Upper flammable limit: 12.5% by volume
<b>Vapour pressure</b>	pure CAS 509-34-2: 0 Pa. Temperature: 25 °C. Remarks: No additional details mentioned.; pure CAS 122-99-6: 0.0013 kPa(20°C); pure CAS 100-51-6: 13.2 Pa(20°C); pure CAS 57-55-6: 10.6 Pa(20°C); pure CAS 102-71-6: <1 Pa(25°C)
<b>Vapour density</b>	pure CAS 122-99-6: 4.8 (vs air); pure CAS 100-51-6: 3.7 (vs air); pure CAS 57-55-6: 2.62 (vs air); pure CAS 102-71-6: 5.14 (vs air)
<b>Relative density</b>	pure CAS 509-34-2: 0.313 g/cm <sup>3</sup> . Temperature: 26.7 °C.; 0.401 g/cm <sup>3</sup> . Temperature: 26.7 °C.; pure CAS 122-99-6: 1.1; pure CAS 100-51-6: 1.04; pure CAS 57-55-6: 1.04; pure CAS 24969-06-0: 1.36 g/mL at 25 °C(lit.); pure CAS 102-71-6: 1.1
<b>Solubility(ies)</b>	pure CAS 509-34-2: In water: 4 829.54 mg/L. Temperature: 30 °C. Remarks: Other details not available.; pure CAS 122-99-6: Solubility in water, g/100ml: 2.7 ; pure CAS 100-51-6: Solubility in water, g/100ml: 4 ; pure CAS 57-55-6: Solubility in water: miscible; pure CAS 102-71-6: Solubility in water: miscible
<b>Partition coefficient n-octanol/water</b>	pure CAS 509-34-2: log Pow = 3.649. Temperature: 25 °C.; pure CAS 122-99-6: 1.2; pure CAS 100-51-6: 1.1; pure CAS 57-55-6: -0.92; pure CAS 102-71-6: -2.3 (not explosive)
<b>Auto-ignition temperature</b>	pure CAS 122-99-6: 500°C; pure CAS 100-51-6: 436°C; pure CAS 57-55-6: 420°C; pure CAS 102-71-6: 324°C
<b>Decomposition temperature</b>	no data available
<b>Viscosity</b>	pure CAS 122-99-6: dynamic viscosity (in mPa s) = 41. Temperature: 19.8°C. Remarks: Temperature in the range 19.5-20.2 °C. Viscosity independent of the shear rate.; dynamic viscosity (in mPa s) = 19. Temperature: 40.5°C. Remarks: Temperature in the range 40-41 °C. Viscosity independent of the shear rate.; pure CAS 100-51-6: dynamic viscosity (in mPa s) = 5.05. Temperature: 25.0°C.; pure CAS 57-55-6: dynamic viscosity (in mPa s) = 43.428. Temperature: 25°C.; dynamic viscosity (in mPa s) = 24.247. Temperature: 35°C.; dynamic viscosity (in mPa s) = 12.78. Temperature: 45°C.; pure CAS 102-71-6: kinematic viscosity (in mm <sup>2</sup> /s) = 830.2. Temperature: 20°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 181.5. Temperature: 40°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 59.1. Temperature: 60.0°C.
<b>Explosive properties</b>	no data available
<b>Oxidising properties</b>	no data available

### 9.2. Other information

no data available

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## 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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

- Oral: pure CAS 122-99-6: LD50 - rat (female) - 1 840 mg/kg bw.;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 57-55-6: LD50 - rat (male/female) - 22 000 mg/kg bw. Remarks:This value corresponds to 21.0 ml/kg bw, with standard errors of 19.2-23.9 ml/kg bw.;pure CAS 102-71-6: LD50 - rat (male/female) - 6 400 mg/kg bw.
- Inhalation: pure CAS 122-99-6: LC50 - rat (male/female) - > 1 000 mg/m<sup>3</sup> air (nominal).;pure CAS 100-51-6: LC50 - rat (male/female) - > 4 178 mg/m<sup>3</sup> air.;pure CAS 57-55-6: LC50 - rabbit - > 317 042 mg/m<sup>3</sup> air.;pure CAS 102-71-6: LC0 - rat (male/female) - saturated TEA atmosphere (approximately 1.8 mg/m<sup>3</sup>).
- Dermal: pure CAS 509-34-2: LD50 - rat (male/female) - > 2 000 mg/kg bw.;pure CAS 122-99-6: LD50 - rat (male/female) - 14 391 mg/kg bw.;pure CAS 100-51-6: LD50 - guinea pig - < 5 000 mg/kg bw.;pure CAS 57-55-6: LD50 - rabbit - > 2 000 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

#### STOT-single exposure

pure CAS 122-99-6: The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system and peripheral nervous system. This may result in impaired functions.;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 57-55-6: The substance is mildly irritating to the eyes and respiratory tract. Ingestion of large amounts could cause metabolic acidosis.;pure CAS 102-71-6: The substance is irritating to the eyes, skin and respiratory tract.

#### STOT-repeated exposure

pure CAS 122-99-6: The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. This may result in impaired functions.;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 122-99-6: A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.;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 57-55-6: No indication can be given whether a harmful concentration in the air will be reached.;pure CAS 102-71-6: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

## SECTION 12: Ecological information

### 12.1. Toxicity

- Toxicity to fish: pure CAS 509-34-2: LC50 - Danio rerio (previous name: Brachydanio rerio) - 50 mg/L - 96 h.;pure CAS 122-99-6: LC50 - Pimephales promelas - 344 mg/L - 96 h.;pure CAS 100-51-6: LC50 - Pimephales promelas - 460 mg/L - 96 h.;pure CAS 57-55-6: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 40 613 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 509-34-2: EC50 - Daphnia magna - 3.4 mg/L - 48 h.;pure CAS 122-99-6: EC50 - Daphnia magna - > 500 mg/L - 48 h.;pure CAS 100-51-6: EC50 - Daphnia magna - 230 mg/L - 48 h.;pure CAS 57-55-6: LC50 - Ceriodaphnia dubia - 18 340 mg/L - 48 h.;pure CAS 102-71-6: EC50 - Ceriodaphnia dubia - 609.88 mg/L - 48 h.
- Toxicity to algae: pure CAS 509-34-2: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 13.4 mg/L - 72 h.;pure CAS 122-99-6: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 500 mg/L - 72 h.;pure CAS 100-51-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 770 mg/L - 72 h.;pure CAS 57-55-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 24 200 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 509-34-2: IC50 - activated sludge - > 100 mg/L - 3 h.;pure CAS 122-99-6: EC20 - activated sludge of a predominantly domestic sewage - 620 mg/L - 30 min. Remarks:Respiration rate.;pure CAS 100-51-6: IC50 - Aerobic heterotrophs and Nitrosomonas - 2 100 mg/L - 49 h. Remarks:Respiration rate.;pure CAS 57-55-6: NOEC - Pseudomonas putida - > 20 000 mg/L - 18 h.;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

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

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### 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.

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### 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

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### 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
3',6'-bis(diethylamino)spiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3-one	solvent red 49	509-34-2	208-096-8
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Benzyl alcohol	Benzyl 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
Propane-1,2-diol	Keton resin	57-55-6	200-338-0
European Inventory of Existing Commercial Chemical Substances (EINECS)			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"-nitrioltriethanol	Triethanolamine	102-71-6	203-049-8
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
<b>Chemical name</b>	<b>Common names and synonyms</b>	<b>CAS number</b>	<b>EC number</b>
Phosphoric acid, mono- and bis(2-ethylhexyl) esters	Phosphoric acid ester	90506-69-7	291-933-4
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			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](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.

<b>Acute Tox. 4,H302</b>	Acute toxicity - Oral, Category 4
<b>Skin Corr. 1,H314</b>	Skin corrosion, Category 1
<b>Eye Dam. 1,H318</b>	Serious eye damage, Category 1
<b>Aquatic Chronic 2,H411</b>	Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2
<b>H302</b>	Harmful if swallowed.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.
<b>H411</b>	Toxic to aquatic life with long lasting effects.

### 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](mailto: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.*



# SAFETY DATA SHEETS

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

Version: 1.0  
Creation Date: Mar. 24, 2022  
Revision Date: Mar. 24, 2022

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

### 1.1 – Product identifier

Product name : INK for Z- Grip BP BLUE

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

- Use of the substance/mixture : Ink for writing implement
- Recommended restrictions on use : No information available
- Uses Advised Against : No information available

### 1.3 – Details of the supplier of the SDS

• Importer : ZEBRA PEN (UK) LTD  
Unit 2, Hook Rise Business Centre,  
Hook Rise South, Surbiton, Surrey KT6 7LD, UK  
TEL : 44 208 974 2202  
FAX : 44 208 974 2131  
• Manufacture : ZEBRA CO., LTD.  
2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN  
TEL : +81-3-3268-1193  
FAX : +81-3-3268-1197

### 1.4 – Emergency telephone number

- Importer : +44 208 974 2202
- Manufacture : +81-3-3268-1193

This phone number is available only during office hours: 9 a.m. to half past 5 p.m.  
(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  
Skin Corr. 1, H314  
Eye Dam. 1, H318

#### 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

Danger

<b>Hazard statement(s)</b>	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
<b>Precautionary statement(s)</b>	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P310 Immediately call a POISON CENTER/doctor/... P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Supplemental Hazard information (EU)</b>	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)	Concentration
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7	-	Acute Tox. 4,H302;Eye Dam. 1,H318;STOT SE 3,H335	25%
Benzyl alcohol	Benzyl alcohol	100-51-6	202-859-9	-	Acute Tox. 4,H302;Acute Tox. 4,H332	15%
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	BX	147-14-8	205-685-1	-	Not classified.	15%
-	Sovent blue38	13128-51-4	-	-	no data available	15%
Propane-1,2-diol	Keton resin	57-55-6	200-338-0	-	Not classified.	10%
(R)-(-)-1,2-Propanediol	1,2-propanediol	4254-14-2	610-038-5	-	Eye Irrit. 2,H319	10%
-	Castor oil resin	66070-88-0	-	-	no data available	5%
2,2',2''-nitrilotriethanol	Triethanolamine	102-71-6	203-049-8	-	Not classified.	4%
Phosphoric acid, mono- and bis(2-ethylhexyl) esters	Phosphric acid ester	90506-69-7	291-933-4	-	Skin Corr. 1B,H314	1%

## 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.

#### In case of skin contact

Rinse and then wash skin with water and soap.

#### In case of eye contact

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

#### If swallowed

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

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

May cause moderate eye irritation and moderate corneal injury. Excessive exposure may cause skin irritation and hemolysis. (USCG, 1999)

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

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

To fight fire, use CO<sub>2</sub>, dry chemical.

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

Combustible.

### 5.3. Advice for firefighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

---

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

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

### 6.2. Environmental precautions

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

### 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.

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## 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.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure limit values

MAK: 5.7 mg/m<sup>3</sup>, 1 ppm; peak limitation category: I(1); 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

<b>Appearance</b>	Liquid.
<b>Odour</b>	pure CAS 122-99-6: Faint aromatic odor; pure CAS 100-51-6: Faint aromatic odor; pure CAS 57-55-6: Practically odorless; pure CAS 102-71-6: Slight ammonical odor
<b>Odour threshold</b>	pure CAS 100-51-6: 5.5 ppm
<b>pH</b>	pure CAS 100-51-6: A solution in water is neutral to litmus; pure CAS 102-71-6: pH = 10.5 (0.1 N aqueous solution); strong base
<b>Melting point/freezing point</b>	pure CAS 122-99-6: 14°C; pure CAS 100-51-6: -15°C; pure CAS 147-14-8: 480 °C. Atm. press.: 1013 hPa.; pure CAS 57-55-6: -59°C; pure CAS 4254-14-2: 317°C (lit.); pure CAS 102-71-6: 21.6°C
<b>Initial boiling point and boiling range</b>	pure CAS 122-99-6: 245°C; pure CAS 100-51-6: 205°C; pure CAS 147-14-8: 93°C/10mmHg (lit.); pure CAS 57-55-6: 188.2°C; pure CAS 4254-14-2: 212°C (lit.); pure CAS 102-71-6: 335.4°C
<b>Flash point</b>	pure CAS 122-99-6: 127°C c.c.; pure CAS 100-51-6: 93°C c.c.; pure CAS 147-14-8: 89°C (lit.); pure CAS 57-55-6: 101°C c.c.; pure CAS 4254-14-2: 103°C (lit.); pure CAS 102-71-6: 179°C
<b>Evaporation rate</b>	no data available
<b>Flammability</b>	pure CAS 122-99-6: Combustible.; pure CAS 100-51-6: Combustible.; pure CAS 57-55-6: Combustible.; pure CAS 102-71-6: Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
<b>Upper/lower flammability or explosive limits</b>	pure CAS 57-55-6: Lower flammable limit: 2.6% by volume; Upper flammable limit: 12.5% by volume
<b>Vapour pressure</b>	pure CAS 122-99-6: 0.0013 kPa(20°C); pure CAS 100-51-6: 13.2 Pa(20°C); pure CAS 147-14-8: < 0 hPa. Temperature: 20 °C. Remarks: Extrapolated.; Ca. 0.018 hPa. Temperature: 475 °C.; pure CAS 57-55-6: 10.6 Pa(20°C); pure CAS 102-71-6: < 1 Pa(25°C)
<b>Vapour density</b>	pure CAS 122-99-6: 4.8 (vs air); pure CAS 100-51-6: 3.7 (vs air); pure CAS 57-55-6: 2.62 (vs air); pure CAS 102-71-6: 5.14 (vs air)
<b>Relative density</b>	pure CAS 122-99-6: 1.1; pure CAS 100-51-6: 1.04; pure CAS 147-14-8: 1.62 g/cm <sup>3</sup> ; pure CAS 57-55-6: 1.04; pure CAS 4254-14-2: 1.04; pure CAS 102-71-6: 1.1
<b>Solubility(ies)</b>	pure CAS 122-99-6: Solubility in water, g/100ml: 2.7 ; pure CAS 100-51-6: Solubility in water, g/100ml: 4 ; pure CAS 147-14-8: In water: 4 - 9 µg/L. Temperature: 23 °C. N-octanol.; pure CAS 57-55-6: Solubility in water: miscible; pure CAS 102-71-6: Solubility in water: miscible
<b>Partition coefficient n-octanol/water</b>	pure CAS 122-99-6: 1.2; pure CAS 100-51-6: 1.1; pure CAS 147-14-8: 6.6 (calculated); pure CAS 57-55-6: -0.92; pure CAS 102-71-6: -2.3 (not explosive)
<b>Auto-ignition temperature</b>	pure CAS 122-99-6: 500°C; pure CAS 100-51-6: 436°C; pure CAS 147-14-8: 356 °C. Remarks: At atm. press. of 1013.0 hPa.; pure CAS 57-55-6: 420°C; pure CAS 102-71-6: 324°C
<b>Decomposition temperature</b>	no data available
<b>Viscosity</b>	pure CAS 122-99-6: dynamic viscosity (in mPa s) = 41. Temperature: 19.8°C. Remarks: Temperature in the range 19.5-20.2 °C. Viscosity independent of the shear rate.; dynamic viscosity (in mPa s) = 19. Temperature: 40.5°C. Remarks: Temperature in the range 40-41 °C. Viscosity independent of the shear rate.; pure CAS 100-51-6: dynamic viscosity (in mPa s) = 5.05. Temperature: 25.0°C.; pure CAS 57-55-6: dynamic viscosity (in mPa s) = 43.428. Temperature: 25°C.; dynamic viscosity (in mPa s) = 24.247. Temperature: 35°C.; dynamic viscosity (in mPa s) = 12.78. Temperature: 45°C.; pure CAS 102-71-6: kinematic viscosity (in mm <sup>2</sup> /s) = 830.2. Temperature: 20°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 181.5. Temperature: 40°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 59.1. Temperature: 60.0°C.
<b>Explosive properties</b>	no data available
<b>Oxidising properties</b>	no data available

## 9.2. Other information

no data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with strong oxidants.

### 10.2. Chemical stability

Stable in presence of acids & alkalis.

### 10.3. Possibility of hazardous reactions

Reacts with strong oxidants.

### 10.4. Conditions to avoid

no data available

### 10.5. Incompatible materials

Can react vigorously with oxidizing materials.

### 10.6. Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

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## SECTION 11: Toxicological information

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

- Oral: pure CAS 122-99-6: LD50 - rat (female) - 1 840 mg/kg bw.; 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 147-14-8: LD50 - rat (male/female) - > 6 400 mg/kg bw.; pure CAS 57-55-6: LD50 - rat (male/female) - 22 000 mg/kg bw. Remarks: This value corresponds to 21.0 ml/kg bw, with standard errors of 19.2-23.9 ml/kg bw.; pure CAS 102-71-6: LD50 - rat (male/female) - 6 400 mg/kg bw.
- Inhalation: pure CAS 122-99-6: LC50 - rat (male/female) - > 1 000 mg/m<sup>3</sup> air (nominal); pure CAS 100-51-6: LC50 - rat (male/female) - > 4 178 mg/m<sup>3</sup> air.; pure CAS 57-55-6: LC50 - rabbit - > 317 042 mg/m<sup>3</sup> air.; pure CAS 102-71-6: LC0 - rat (male/female) - saturated TEA atmosphere (approximately 1.8 mg/m<sup>3</sup>).
- Dermal: pure CAS 122-99-6: LD50 - rat (male/female) - 14 391 mg/kg bw.; pure CAS 100-51-6: LD50 - guinea pig - < 5 000 mg/kg bw.; pure CAS 147-14-8: LD50 - rat (male) - > 5 000 mg/kg bw.; pure CAS 57-55-6: LD50 - rabbit - > 2 000 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

#### STOT-single exposure

pure CAS 122-99-6: The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system and peripheral nervous system. This may result in impaired functions.; 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 57-55-6: The substance is mildly irritating to the eyes and respiratory tract. Ingestion of large amounts could cause metabolic acidosis.; pure CAS 102-71-6: The substance is irritating to the eyes, skin and respiratory tract.

#### STOT-repeated exposure

pure CAS 122-99-6: The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. This may result in impaired functions.; 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 122-99-6: A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.; 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 147-14-8: No indication can be given about the rate at which a harmful concentration of this substance in the air is reached.; pure CAS 57-55-6: No indication can be given whether a harmful concentration in the air will be reached.; pure CAS 102-71-6: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

---

## SECTION 12: Ecological information

### 12.1. Toxicity

- Toxicity to fish: pure CAS 122-99-6: LC50 - Pimephales promelas - 344 mg/L - 96 h.; pure CAS 100-51-6: LC50 - Pimephales promelas - 460 mg/L - 96 h.; pure CAS 147-14-8: LC50 - Danio rerio (previous name: Brachydanio rerio) - > 100 mg/L - 96 h.; pure CAS 57-55-6: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 40 613 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 122-99-6: EC50 - Daphnia magna - > 500 mg/L - 48 h.; pure CAS 100-51-6: EC50 - Daphnia magna - 230 mg/L - 48 h.; pure CAS 147-14-8: EC50 - Daphnia magna - > 500 mg/L - 48 h.; pure CAS 57-55-6: LC50 - Ceriodaphnia dubia - 18 340 mg/L - 48 h.; pure CAS 102-71-6: EC50 - Ceriodaphnia dubia - 609.88 mg/L - 48 h.
- Toxicity to algae: pure CAS 122-99-6: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 500 mg/L - 72 h.; pure CAS 100-51-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 770 mg/L - 72 h.; pure CAS 147-14-8: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 100 mg/L - 72 h.; pure CAS 57-55-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 24 200 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 122-99-6: EC20 - activated sludge of a predominantly domestic sewage - 620 mg/L - 30 min. Remarks: Respiration rate.; pure CAS 100-51-6: IC50 - Aerobic heterotrophs and Nitrosomonas - 2 100 mg/L - 49 h. Remarks: Respiration rate.; pure CAS 147-14-8: EC50 - activated sludge - > 10 000 mg/L - 3 h. Remarks: Respiration rate.; pure CAS 57-55-6: NOEC - Pseudomonas putida - > 20 000 mg/L - 18 h.; 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: For 2-phenoxyethanol, theoretical BODs of 2% (5-day), 71% (10-day), and 80% (20-day) have been measured(1); a theoretical 20-day BOD of 50% indicates a compound will largely be removed during biological waste treatment(1).

### 12.3. Bioaccumulative potential

An estimated BCF of 1.5 was calculated in fish for 2-phenoxyethanol(SRC), using a log Kow of 1.16(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

Using a structure estimation method based on molecular connectivity indices(1), the Koc of 2-phenoxyethanol can be estimated to be 15(SRC). According to a classification scheme(2), this estimated Koc value suggests that 2-phenoxyethanol is expected to have very high mobility in soil.

#### 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: 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 and the IBC Code

no data available

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### 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
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Benzyl alcohol	Benzyl 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
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	BX	147-14-8	205-685-1
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
-	Sovent blue38	13128-51-4	-
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Propane-1,2-diol	Keton resin	57-55-6	200-338-0
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.

Chemical name	Common names and synonyms	CAS number	EC number
(R)-(-)-1,2-Propanediol	1,2-propanediol	4254-14-2	610-038-5
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
-	Castor oil resin	66070-88-0	-
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
2,2',2''-nitrioltriethanol	Triethanolamine	102-71-6	203-049-8
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Phosphoric acid, mono- and bis(2-ethylhexyl) esters	Phosphoric acid ester	90506-69-7	291-933-4
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			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](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.

<b>Acute Tox. 4,H302</b>	Acute toxicity - Oral, Category 4
<b>Skin Corr. 1,H314</b>	Skin corrosion, Category 1
<b>Eye Dam. 1,H318</b>	Serious eye damage, Category 1
<b>H302</b>	Harmful if swallowed.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.

### 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.

### Other Information

The relation between odour and the occupational exposure limit cannot be indicated.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto: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.*

# SAFETY DATA SHEETS

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

Version: 1.0  
Creation Date: Mar. 24, 2022  
Revision Date: Mar. 24, 2022

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

### 1.1 – Product identifier

Product name : INK for Z- Grip BP GREEN

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

- Use of the substance/mixture : Ink for writing implement
- Recommended restrictions on use : No information available
- Uses Advised Against : No information available

### 1.3 – Details of the supplier of the SDS

- Importer : ZEBRA PEN (UK) LTD  
Unit 2, Hook Rise Business Centre,  
Hook Rise South, Surbiton, Surrey KT6 7LD, UK  
TEL : 44 208 974 2202  
FAX : 44 208 974 2131
- Manufacture : ZEBRA CO., LTD.  
2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN  
TEL : +81-3-3268-1193  
FAX : +81-3-3268-1197

### 1.4 – Emergency telephone number

- Importer : +44 208 974 2202
- Manufacture : +81-3-3268-1193

This phone number is available only during office hours: 9 a.m. to half past 5 p.m.  
(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  
Skin Corr. 1, H314  
Eye Dam. 1, H318

#### 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

Danger



<b>Hazard statement(s)</b>	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
<b>Precautionary statement(s)</b>	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P310 Immediately call a POISON CENTER/doctor/... P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Supplemental Hazard information (EU)</b>	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)	Concentration
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0	-	Not classified.	28%
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7	-	Acute Tox. 4,H302;Eye Dam. 1,H318;STOT SE 3,H335	20%
-	Sovent blue38	13128-51-4	-	-	no data available	15%
Benzyl alcohol	Benzy1 alcohol	100-51-6	202-859-9	-	Acute Tox. 4,H302;Acute Tox. 4,H332	12%
Propane-1,2-diol	Propane-1,2-diol	57-55-6	200-338-0	-	Not classified.	12%
Disodium 5,5'-dimethyl-4,4'-bis[[2-oxo-1-[(phenylamino)carbonyl]propyl]azo][1,1'-biphenyl]-2,2'-disulphonate	Acid yellow 44	2429-76-7	219-386-9	-	Not classified.	8%
2,2',2''-nitrilotriethanol	Triethanolamine	102-71-6	203-049-8	-	Not classified.	5%

## 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.

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## 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.

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## 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.

### 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.

### 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	2-Phenoxy Ethanol			
CAS No.	122-99-6			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Austria	20	110	20	110
Canada - Ontario	25	141		
Finland	20	110	50 (1)	290 (1)
Germany (AGS)	20 (1)	110 (1)	40 (1)(2)	220 (1)(2)
Germany (DFG)	1 (1)	5,7 (1)	1 (1)(2)	5,7 (1)(2)
Poland		230		
Switzerland	20	110	40	220
	Remarks			
Finland	(1) 15 minutes average value			
Germany (AGS)	(1) Inhalable aerosol and vapour (2) 15 minutes reference period			
Germany (DFG)	(1) Inhalable fraction and vapour (2) 15 minutes average value			

Component	Benzyl alcohol			
CAS No.	100-51-6			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Finland	10	45		
Germany (DFG)	5 (1)	22 (1)	10 (1)(2)	44 (1)(2)
Latvia		5		

<b>Component</b>	Benzyl alcohol
<b>CAS No.</b>	100-51-6

	<b>Remarks</b>
<b>Germany (DFG)</b>	(1) Inhalable fraction and vapour (2) 15 minutes average value

<b>Component</b>	Propane-1,2-diol			
<b>CAS No.</b>	57-55-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Australia</b>	150	474		
<b>Canada - Ontario</b>	50	155		
<b>Ireland</b>	150	470		
<b>New Zealand</b>	150 (1)	474		
		10 (1)		
<b>United Kingdom</b>	150	474		
	<b>Remarks</b>			
<b>New Zealand</b>	(1) particulates only			

<b>Component</b>	Triethanolamine			
<b>CAS No.</b>	102-71-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Australia</b>		5		
<b>Austria</b>	0,8	5 inhalable aerosol	0,16	10 inhalable aerosol
<b>Belgium</b>		5		
<b>Canada - Ontario</b>	0,5	3,1		
<b>Canada - Québec</b>		5		
<b>Denmark</b>	0,5	3,1	1	6,2
<b>Finland</b>		5		
<b>Germany (DFG)</b>		5 (1)		10 (1)(2)
<b>Ireland</b>		5		
<b>New Zealand</b>		5		
<b>Singapore</b>		5		
<b>Spain</b>		5		
<b>Sweden</b>	0,8	5	1,6 (1)	10 (1)
<b>Switzerland</b>		5 (1)		10 (1)(2)
	<b>Remarks</b>			
<b>Germany (DFG)</b>	(1) Inhalable fraction (2) 15 minutes average value			
<b>Sweden</b>	(1) 15 minutes average value			
<b>Switzerland</b>	(1) Inhalable fraction (2) 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.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Odour</b>	pure CAS 122-99-6: Faint aromatic odor; pure CAS 100-51-6: Faint aromatic odor; pure CAS 57-55-6: Practically odorless; pure CAS 102-71-6: Slight ammoniacal odor
<b>Odour threshold</b>	pure CAS 100-51-6: 5.5 ppm
<b>pH</b>	pure CAS 100-51-6: A solution in water is neutral to litmus; pure CAS 102-71-6: pH = 10.5 (0.1 N aqueous solution); strong base
<b>Melting point/freezing point</b>	pure CAS 122-99-6: 14°C; pure CAS 100-51-6: -15°C; pure CAS 57-55-6: -59°C; pure CAS 102-71-6: 21.6°C
<b>Initial boiling point and boiling range</b>	pure CAS 122-99-6: 245°C; pure CAS 100-51-6: 205°C; pure CAS 57-55-6: 188.2°C; pure CAS 102-71-6: 335.4°C
<b>Flash point</b>	pure CAS 122-99-6: 127°C c.c.; pure CAS 100-51-6: 93°C c.c.; pure CAS 57-55-6: 101°C c.c.; pure CAS 102-71-6: 179°C
<b>Evaporation rate</b>	no data available
<b>Flammability</b>	pure CAS 122-99-6: Combustible.; pure CAS 100-51-6: Combustible.; pure CAS 57-55-6: Combustible.; pure CAS 102-71-6: Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
<b>Upper/lower flammability or explosive limits</b>	pure CAS 57-55-6: Lower flammable limit: 2.6% by volume; Upper flammable limit: 12.5% by volume
<b>Vapour pressure</b>	pure CAS 122-99-6: 0.0013 kPa(20°C); pure CAS 100-51-6: 13.2 Pa(20°C); pure CAS 57-55-6: 10.6 Pa(20°C); pure CAS 102-71-6: <1 Pa(25°C)
<b>Vapour density</b>	pure CAS 122-99-6: 4.8 (vs air); pure CAS 100-51-6: 3.7 (vs air); pure CAS 57-55-6: 2.62 (vs air); pure CAS 102-71-6: 5.14 (vs air)
<b>Relative density</b>	pure CAS 24969-06-0: 1.36 g/mL at 25 °C(lit.); pure CAS 122-99-6: 1.1; pure CAS 100-51-6: 1.04; pure CAS 57-55-6: 1.04; pure CAS 102-71-6: 1.1
<b>Solubility(ies)</b>	pure CAS 122-99-6: Solubility in water, g/100ml: 2.7 ; pure CAS 100-51-6: Solubility in water, g/100ml: 4 ; pure CAS 57-55-6: Solubility in water: miscible; pure CAS 102-71-6: Solubility in water: miscible
<b>Partition coefficient n-octanol/water</b>	pure CAS 122-99-6: 1.2; pure CAS 100-51-6: 1.1; pure CAS 57-55-6: -0.92; pure CAS 102-71-6: -2.3 (not explosive)
<b>Auto-ignition temperature</b>	pure CAS 122-99-6: 500°C; pure CAS 100-51-6: 436°C; pure CAS 57-55-6: 420°C; pure CAS 102-71-6: 324°C
<b>Decomposition temperature</b>	no data available
<b>Viscosity</b>	pure CAS 122-99-6: dynamic viscosity (in mPa s) = 41. Temperature:19.8°C. Remarks:Temperature in the range 19.5-20.2 °C. Viscosity independent of the shear rate.; dynamic viscosity (in mPa s) = 19. Temperature:40.5°C. Remarks:Temperature in the range 40-41 °C. Viscosity independent of the shear rate.; pure CAS 100-51-6: dynamic viscosity (in mPa s) = 5.05. Temperature:25.0°C.; pure CAS 57-55-6: dynamic viscosity (in mPa s) = 43.428. Temperature:25°C.; dynamic viscosity (in mPa s) = 24.247. Temperature:35°C.; dynamic viscosity (in mPa s) = 12.78. Temperature:45°C.; pure CAS 102-71-6: kinematic viscosity (in mm <sup>2</sup> /s) = 830.2. Temperature:20°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 181.5. Temperature:40°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 59.1. Temperature:60.0°C.
<b>Explosive properties</b>	no data available
<b>Oxidising properties</b>	no data available

### 9.2. Other information

no data available

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## 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

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## SECTION 11: Toxicological information

## 11.1. Information on toxicological effects

### Acute toxicity

- Oral: pure CAS 122-99-6: LD50 - rat (female) - 1 840 mg/kg bw.;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 57-55-6: LD50 - rat (male/female) - 22 000 mg/kg bw. Remarks:This value corresponds to 21.0 ml/kg bw, with standard errors of 19.2-23.9 ml/kg bw.;pure CAS 102-71-6: LD50 - rat (male/female) - 6 400 mg/kg bw.
- Inhalation: pure CAS 122-99-6: LC50 - rat (male/female) - > 1 000 mg/m<sup>3</sup> air (nominal).;pure CAS 100-51-6: LC50 - rat (male/female) - > 4 178 mg/m<sup>3</sup> air.;pure CAS 57-55-6: LC50 - rabbit - > 317 042 mg/m<sup>3</sup> air.;pure CAS 102-71-6: LC0 - rat (male/female) - saturated TEA atmosphere (approximately 1.8 mg/m<sup>3</sup>).
- Dermal: pure CAS 122-99-6: LD50 - rat (male/female) - 14 391 mg/kg bw.;pure CAS 100-51-6: LD50 - guinea pig - < 5 000 mg/kg bw.;pure CAS 57-55-6: LD50 - rabbit - > 2 000 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

### STOT-single exposure

pure CAS 122-99-6: The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system and peripheral nervous system. This may result in impaired functions.;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 57-55-6: The substance is mildly irritating to the eyes and respiratory tract. Ingestion of large amounts could cause metabolic acidosis.;pure CAS 102-71-6: The substance is irritating to the eyes, skin and respiratory tract.

### STOT-repeated exposure

pure CAS 122-99-6: The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. This may result in impaired functions.;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 122-99-6: A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.;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 57-55-6: No indication can be given whether a harmful concentration in the air will be reached.;pure CAS 102-71-6: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

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## SECTION 12: Ecological information

### 12.1. Toxicity

- Toxicity to fish: pure CAS 122-99-6: LC50 - Pimephales promelas - 344 mg/L - 96 h.;pure CAS 100-51-6: LC50 - Pimephales promelas - 460 mg/L - 96 h.;pure CAS 57-55-6: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 40 613 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 122-99-6: EC50 - Daphnia magna - > 500 mg/L - 48 h.;pure CAS 100-51-6: EC50 - Daphnia magna - 230 mg/L - 48 h.;pure CAS 57-55-6: LC50 - Ceriodaphnia dubia - 18 340 mg/L - 48 h.;pure CAS 102-71-6: EC50 - Ceriodaphnia dubia - 609.88 mg/L - 48 h.
- Toxicity to algae: pure CAS 122-99-6: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 500 mg/L - 72 h.;pure CAS 100-51-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 770 mg/L - 72 h.;pure CAS 57-55-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 24 200 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 122-99-6: EC20 - activated sludge of a predominantly domestic sewage - 620 mg/L - 30 min. Remarks:Respiration rate.;pure CAS 100-51-6: IC50 - Aerobic heterotrophs and Nitrosomonas - 2 100 mg/L - 49 h. Remarks:Respiration rate.;pure CAS 57-55-6: NOEC - Pseudomonas putida - > 20 000 mg/L - 18 h.;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

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: 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 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
[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-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
-	Sovent blue38	13128-51-4	-
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
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
Propane-1,2-diol	Propane-1,2-diol	57-55-6	200-338-0
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Disodium 5,5'-dimethyl-4,4'-bis[[2-oxo-1-[(phenylamino)carbonyl]propyl]azo][1,1'-biphenyl]-2,2'-disulphonate	Acid yellow 44	2429-76-7	219-386-9
European Inventory of Existing Commercial Chemical Substances (EINECS)			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.

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## 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](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.

<b>Acute Tox. 4,H302</b>	Acute toxicity - Oral, Category 4
<b>Skin Corr. 1,H314</b>	Skin corrosion, Category 1
<b>Eye Dam. 1,H318</b>	Serious eye damage, Category 1
<b>H302</b>	Harmful if swallowed.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.

### 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](mailto:sds@xixisys.com)**

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*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.*

# SAFETY DATA SHEETS

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

Version: 1.0  
Creation Date: Mar. 24, 2022  
Revision Date: Mar. 24, 2022

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

### 1.1 – Product identifier

Product name : INK for Z-Grip BP VIOLET

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

- Use of the substance/mixture : Ink for writing implement
- Recommended restrictions on use : No information available
- Uses Advised Against : No information available

### 1.3 – Details of the supplier of the SDS

- Importer : ZEBRA PEN (UK) LTD  
Unit 2, Hook Rise Business Centre,  
Hook Rise South, Surbiton, Surrey KT6 7LD, UK  
TEL : 44 208 974 2202  
FAX : 44 208 974 2131
- Manufacture : ZEBRA CO., LTD.  
2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN  
TEL : +81-3-3268-1193  
FAX : +81-3-3268-1197

### 1.4 – Emergency telephone number

- Importer : +44 208 974 2202
- Manufacture : +81-3-3268-1193

This phone number is available only during office hours: 9 a.m. to half past 5 p.m.  
(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  
Skin Corr. 1, H314  
Eye Dam. 1, H318

#### 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

Danger



<b>Hazard statement(s)</b>	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
<b>Precautionary statement(s)</b>	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P310 Immediately call a POISON CENTER/doctor/... P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Supplemental Hazard information (EU)</b>	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)	Concentration
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7	-	Acute Tox. 4,H302;Eye Dam. 1,H318;STOT SE 3,H335	30%
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0	-	Not classified.	28%
Propane-1,2-diol	Propane-1,2-diol	57-55-6	200-338-0	-	Not classified.	15%
Benzyl alcohol	Benzy1 alcohol	100-51-6	202-859-9	-	Acute Tox. 4,H302;Acute Tox. 4,H332	12%
4,4'-{[4-(Methylimino)-2,5-cyclohexadien-1-ylidene]methylene}bis(N,N-dimethylaniline)	Sovent Violet8	52080-58-7	610-776-8	-	Not classified.	10%
2,2',2"-nitrilotriethanol	Triethanolamine	102-71-6	203-049-8	-	Not classified.	5%

## 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.

#### In case of skin contact

Rinse and then wash skin with water and soap.

#### In case of eye contact

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

#### If swallowed

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

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

May cause moderate eye irritation and moderate corneal injury. Excessive exposure may cause skin irritation and hemolysis. (USCG, 1999)

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

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

## SECTION 5: Firefighting measures

## 5.1. Extinguishing media

### Suitable extinguishing media

To fight fire, use CO<sub>2</sub>, dry chemical.

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

Combustible.

## 5.3. Advice for firefighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

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

### 6.2. Environmental precautions

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

### 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.

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## 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.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure limit values

MAK: 5.7 mg/m<sup>3</sup>, 1 ppm; peak limitation category: I(1); 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.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

Liquid.

#### Odour

pure CAS 122-99-6: Faint aromatic odor; pure CAS 57-55-6: Practically odorless; pure CAS 100-51-6: Faint aromatic odor; pure CAS 102-71-6: Slight ammoniacal odor

#### Odour threshold

pure CAS 100-51-6: 5.5 ppm

<b>pH</b>	pure CAS 100-51-6: A solution in water is neutral to litmus; pure CAS 102-71-6: pH = 10.5 (0.1 N aqueous solution); strong base
<b>Melting point/freezing point</b>	pure CAS 122-99-6: 14°C; pure CAS 57-55-6: -59°C; pure CAS 100-51-6: -15°C; pure CAS 52080-58-7: 192°C (dec.) (lit.); pure CAS 102-71-6: 21.6°C
<b>Initial boiling point and boiling range</b>	pure CAS 122-99-6: 245°C; pure CAS 57-55-6: 188.2°C; pure CAS 100-51-6: 205°C; pure CAS 52080-58-7: 196°C (lit.); pure CAS 102-71-6: 335.4°C
<b>Flash point</b>	pure CAS 122-99-6: 127°C c.c.; pure CAS 57-55-6: 101°C c.c.; pure CAS 100-51-6: 93°C c.c.; pure CAS 52080-58-7: 58°C (lit.); pure CAS 102-71-6: 179°C
<b>Evaporation rate</b>	no data available
<b>Flammability</b>	pure CAS 122-99-6: Combustible.; pure CAS 57-55-6: Combustible.; pure CAS 100-51-6: Combustible.; pure CAS 102-71-6: Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
<b>Upper/lower flammability or explosive limits</b>	pure CAS 57-55-6: Lower flammable limit: 2.6% by volume; Upper flammable limit: 12.5% by volume
<b>Vapour pressure</b>	pure CAS 122-99-6: 0.0013 kPa(20°C); pure CAS 57-55-6: 10.6 Pa(20°C); pure CAS 100-51-6: 13.2 Pa(20°C); pure CAS 102-71-6: <1 Pa(25°C)
<b>Vapour density</b>	pure CAS 122-99-6: 4.8 (vs air); pure CAS 57-55-6: 2.62 (vs air); pure CAS 100-51-6: 3.7 (vs air); pure CAS 102-71-6: 5.14 (vs air)
<b>Relative density</b>	pure CAS 122-99-6: 1.1; pure CAS 24969-06-0: 1.36 g/mL at 25 °C (lit.); pure CAS 57-55-6: 1.04; pure CAS 100-51-6: 1.04; pure CAS 102-71-6: 1.1
<b>Solubility(ies)</b>	pure CAS 122-99-6: Solubility in water, g/100ml: 2.7 ; pure CAS 57-55-6: Solubility in water: miscible; pure CAS 100-51-6: Solubility in water, g/100ml: 4 ; pure CAS 102-71-6: Solubility in water: miscible
<b>Partition coefficient n-octanol/water</b>	pure CAS 122-99-6: 1.2; pure CAS 57-55-6: -0.92; pure CAS 100-51-6: 1.1; pure CAS 102-71-6: -2.3 (not explosive)
<b>Auto-ignition temperature</b>	pure CAS 122-99-6: 500°C; pure CAS 57-55-6: 420°C; pure CAS 100-51-6: 436°C; pure CAS 102-71-6: 324°C
<b>Decomposition temperature</b>	no data available
<b>Viscosity</b>	pure CAS 122-99-6: dynamic viscosity (in mPa s) = 41. Temperature: 19.8°C. Remarks: Temperature in the range 19.5-20.2 °C. Viscosity independent of the shear rate.; dynamic viscosity (in mPa s) = 19. Temperature: 40.5°C. Remarks: Temperature in the range 40-41 °C. Viscosity independent of the shear rate.; pure CAS 57-55-6: dynamic viscosity (in mPa s) = 43.428. Temperature: 25°C.; dynamic viscosity (in mPa s) = 24.247. Temperature: 35°C.; dynamic viscosity (in mPa s) = 12.78. Temperature: 45°C.; 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 <sup>2</sup> /s) = 830.2. Temperature: 20°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 181.5. Temperature: 40°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 59.1. Temperature: 60.0°C.
<b>Explosive properties</b>	no data available
<b>Oxidising properties</b>	no data available

## 9.2. Other information

no data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with strong oxidants.

### 10.2. Chemical stability

Stable in presence of acids & alkalies.

### 10.3. Possibility of hazardous reactions

Reacts with strong oxidants.

### 10.4. Conditions to avoid

no data available

### 10.5. Incompatible materials

Can react vigorously with oxidizing materials.

### 10.6. Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

- Oral: pure CAS 122-99-6: LD50 - rat (female) - 1 840 mg/kg bw.; pure CAS 57-55-6: LD50 - rat (male/female) - 22 000 mg/kg bw. Remarks: This value corresponds to 21.0 ml/kg bw, with standard errors of 19.2-23.9 ml/kg bw.; 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 122-99-6: LC50 - rat (male/female) - > 1 000 mg/m<sup>3</sup> air (nominal); pure CAS 57-55-6: LC50 - rabbit - > 317 042 mg/m<sup>3</sup> air.; pure CAS 100-51-6: LC50 - rat (male/female) - > 4 178 mg/m<sup>3</sup> air.; pure CAS 102-71-6: LC0 - rat (male/female) - saturated

TEA atmosphere (approximately 1.8 mg/m<sup>3</sup>).

- Dermal: pure CAS 122-99-6: LD50 - rat (male/female) - 14 391 mg/kg bw.; pure CAS 57-55-6: LD50 - rabbit - > 2 000 mg/kg bw.; 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

### **STOT-single exposure**

pure CAS 122-99-6: The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system and peripheral nervous system. This may result in impaired functions.; pure CAS 57-55-6: The substance is mildly irritating to the eyes and respiratory tract. Ingestion of large amounts could cause metabolic acidosis.; 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 122-99-6: The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. This may result in impaired functions.; 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 122-99-6: A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.; pure CAS 57-55-6: No indication can be given whether a harmful concentration in the air will be reached.; 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.

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## **SECTION 12: Ecological information**

### **12.1. Toxicity**

- Toxicity to fish: pure CAS 122-99-6: LC50 - Pimephales promelas - 344 mg/L - 96 h.; pure CAS 57-55-6: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 40 613 mg/L - 96 h.; 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 122-99-6: EC50 - Daphnia magna - > 500 mg/L - 48 h.; pure CAS 57-55-6: LC50 - Ceriodaphnia dubia - 18 340 mg/L - 48 h.; 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 122-99-6: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 500 mg/L - 72 h.; pure CAS 57-55-6: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 24 200 mg/L - 72 h.; 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 122-99-6: EC20 - activated sludge of a predominantly domestic sewage - 620 mg/L - 30 min. Remarks: Respiration rate.; pure CAS 57-55-6: NOEC - Pseudomonas putida - > 20 000 mg/L - 18 h.; 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: For 2-phenoxyethanol, theoretical BODs of 2% (5-day), 71% (10-day), and 80% (20-day) have been measured(1); a theoretical 20-day BOD of 50% indicates a compound will largely be removed during biological waste treatment(1).

### **12.3. Bioaccumulative potential**

An estimated BCF of 1.5 was calculated in fish for 2-phenoxyethanol(SRC), using a log Kow of 1.16(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**

Using a structure estimation method based on molecular connectivity indices(1), the Koc of 2-phenoxyethanol can be estimated to be 15(SRC). According to a classification scheme(2), this estimated Koc value suggests that 2-phenoxyethanol is expected to have very high mobility in soil.

### **12.5. Results of PBT and vPvB assessment**

no data available

### **12.6. Other adverse effects**

no data available

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## **SECTION 13: Disposal considerations**

**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: 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 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
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Propane-1,2-diol	Propane-1,2-diol	57-55-6	200-338-0
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Benzyl alcohol	Benzyl alcohol	100-51-6	202-859-9
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
4,4'-{[4-(Methylimino)-2,5-cyclohexadien-1-ylidene]methylene}bis(N,N-dimethylaniline)	Sovent Violet8	52080-58-7	610-776-8
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
2,2',2"-nitrioltriethanol	Triethanolamine	102-71-6	203-049-8
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			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](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.

<b>Acute Tox. 4,H302</b>	Acute toxicity - Oral, Category 4
<b>Skin Corr. 1,H314</b>	Skin corrosion, Category 1
<b>Eye Dam. 1,H318</b>	Serious eye damage, Category 1
<b>H302</b>	Harmful if swallowed.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.

## 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.

## Other Information

The relation between odour and the occupational exposure limit cannot be indicated.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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*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.*

# SAFETY DATA SHEETS

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

Version: 1.0  
Creation Date: Mar. 24, 2022  
Revision Date: Mar. 24, 2022

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

### 1.1 – Product identifier

Product name : INK for Z-Grip BP PINK

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

- Use of the substance/mixture : Ink for writing implement
- Recommended restrictions on use : No information available
- Uses Advised Against : No information available

### 1.3 – Details of the supplier of the SDS

- Importer : ZEBRA PEN (UK) LTD  
Unit 2, Hook Rise Business Centre,  
Hook Rise South, Surbiton, Surrey KT6 7LD, UK  
TEL : 44 208 974 2202  
FAX : 44 208 974 2131
- Manufacture : ZEBRA CO., LTD.  
2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN  
TEL : +81-3-3268-1193  
FAX : +81-3-3268-1197

### 1.4 – Emergency telephone number

- Importer : +44 208 974 2202
- Manufacture : +81-3-3268-1193

This phone number is available only during office hours: 9 a.m. to half past 5 p.m.  
(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  
Skin Corr. 1, H314  
Eye Dam. 1, H318

#### 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

Danger

<b>Hazard statement(s)</b>	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
<b>Precautionary statement(s)</b>	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P310 Immediately call a POISON CENTER/doctor/... P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Supplemental Hazard information (EU)</b>	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)	Concentration
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0	-	Not classified.	28%
Propane-1,2-diol	Propane-1,2-diol	57-55-6	200-338-0	-	Not classified.	22%
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7	-	Acute Tox. 4,H302;Eye Dam. 1,H318;STOT SE 3,H335	20%
Benzyl alcohol	Benzy1 alcohol	100-51-6	202-859-9	-	Acute Tox. 4,H302;Acute Tox. 4,H332	15%
[Name confidential or not available]	Ci basic red49	12270-23-4	602-843-5	-	no data available	10%
2,2',2"-nitri1otriethanol	Triethanolamine	102-71-6	203-049-8	-	Not classified.	5%

## 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.

### 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.

### 7.3. Specific end use(s)

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

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure limit values

<b>Component</b>	Propane-1,2-diol			
<b>CAS No.</b>	57-55-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Australia</b>	150	474		
<b>Canada - Ontario</b>	50	155		
<b>Ireland</b>	150	470		
<b>New Zealand</b>	150 (1)	474		
		10 (1)		
<b>United Kingdom</b>	150	474		
	<b>Remarks</b>			
<b>New Zealand</b>	(1) particulates only			

<b>Component</b>	2-Phenoxy Ethanol			
<b>CAS No.</b>	122-99-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Austria</b>	20	110	20	110
<b>Canada - Ontario</b>	25	141		
<b>Finland</b>	20	110	50 (1)	290 (1)
<b>Germany (AGS)</b>	20 (1)	110 (1)	40 (1)(2)	220 (1)(2)
<b>Germany (DFG)</b>	1 (1)	5,7 (1)	1 (1)(2)	5,7 (1)(2)
<b>Poland</b>		230		
<b>Switzerland</b>	20	110	40	220
	<b>Remarks</b>			
<b>Finland</b>	(1) 15 minutes average value			
<b>Germany (AGS)</b>	(1) Inhalable aerosol and vapour (2) 15 minutes reference period			

<b>Component</b>	2-Phenoxy Ethanol
<b>CAS No.</b>	122-99-6
<b>Germany (DFG)</b>	(1) Inhalable fraction and vapour (2) 15 minutes average value

<b>Component</b>	Benzyl alcohol			
<b>CAS No.</b>	100-51-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Finland</b>	10	45		
<b>Germany (DFG)</b>	5 (1)	22 (1)	10 (1)(2)	44 (1)(2)
<b>Latvia</b>		5		
	<b>Remarks</b>			
<b>Germany (DFG)</b>	(1) Inhalable fraction and vapour (2) 15 minutes average value			

<b>Component</b>	Triethanolamine			
<b>CAS No.</b>	102-71-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Australia</b>		5		
<b>Austria</b>	0,8	5 inhalable aerosol	0,16	10 inhalable aerosol
<b>Belgium</b>		5		
<b>Canada - Ontario</b>	0,5	3,1		
<b>Canada - Québec</b>		5		
<b>Denmark</b>	0,5	3,1	1	6,2
<b>Finland</b>		5		
<b>Germany (DFG)</b>		5 (1)		10 (1)(2)
<b>Ireland</b>		5		
<b>New Zealand</b>		5		
<b>Singapore</b>		5		
<b>Spain</b>		5		
<b>Sweden</b>	0,8	5	1,6 (1)	10 (1)
<b>Switzerland</b>		5 (1)		10 (1)(2)
	<b>Remarks</b>			
<b>Germany (DFG)</b>	(1) Inhalable fraction (2) 15 minutes average value			
<b>Sweden</b>	(1) 15 minutes average value			
<b>Switzerland</b>	(1) Inhalable fraction (2) 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.

<b>Odour</b>	pure CAS 57-55-6: Practically odorless; pure CAS 122-99-6: Faint aromatic odor; pure CAS 100-51-6: Faint aromatic odor; pure CAS 102-71-6: Slight ammoniacal odor
<b>Odour threshold</b>	pure CAS 100-51-6: 5.5 ppm
<b>pH</b>	pure CAS 100-51-6: A solution in water is neutral to litmus; pure CAS 102-71-6: pH = 10.5 (0.1 N aqueous solution); strong base
<b>Melting point/freezing point</b>	pure CAS 57-55-6: -59°C; pure CAS 122-99-6: 14°C; pure CAS 100-51-6: -15°C; pure CAS 102-71-6: 21.6°C
<b>Initial boiling point and boiling range</b>	pure CAS 57-55-6: 188.2°C; pure CAS 122-99-6: 245°C; pure CAS 100-51-6: 205°C; pure CAS 102-71-6: 335.4°C
<b>Flash point</b>	pure CAS 57-55-6: 101°C c.c.; pure CAS 122-99-6: 127°C c.c.; pure CAS 100-51-6: 93°C c.c.; pure CAS 102-71-6: 179°C
<b>Evaporation rate</b>	no data available
<b>Flammability</b>	pure CAS 57-55-6: Combustible.; pure CAS 122-99-6: Combustible.; pure CAS 100-51-6: Combustible.; pure CAS 102-71-6: Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
<b>Upper/lower flammability or explosive limits</b>	pure CAS 57-55-6: Lower flammable limit: 2.6% by volume; Upper flammable limit: 12.5% by volume
<b>Vapour pressure</b>	pure CAS 57-55-6: 10.6 Pa(20°C); pure CAS 122-99-6: 0.0013 kPa(20°C); pure CAS 100-51-6: 13.2 Pa(20°C); pure CAS 102-71-6: <1 Pa(25°C)
<b>Vapour density</b>	pure CAS 57-55-6: 2.62 (vs air); pure CAS 122-99-6: 4.8 (vs air); pure CAS 100-51-6: 3.7 (vs air); pure CAS 102-71-6: 5.14 (vs air)
<b>Relative density</b>	pure CAS 24969-06-0: 1.36 g/mL at 25 °C(lit.); pure CAS 57-55-6: 1.04; pure CAS 122-99-6: 1.1; pure CAS 100-51-6: 1.04; pure CAS 102-71-6: 1.1
<b>Solubility(ies)</b>	pure CAS 57-55-6: Solubility in water: miscible; pure CAS 122-99-6: Solubility in water, g/100ml: 2.7 ; pure CAS 100-51-6: Solubility in water, g/100ml: 4 ; pure CAS 102-71-6: Solubility in water: miscible
<b>Partition coefficient n-octanol/water</b>	pure CAS 57-55-6: -0.92; pure CAS 122-99-6: 1.2; pure CAS 100-51-6: 1.1; pure CAS 102-71-6: -2.3 (not explosive)
<b>Auto-ignition temperature</b>	pure CAS 57-55-6: 420°C; pure CAS 122-99-6: 500°C; pure CAS 100-51-6: 436°C; pure CAS 102-71-6: 324°C
<b>Decomposition temperature</b>	no data available
<b>Viscosity</b>	pure CAS 57-55-6: dynamic viscosity (in mPa s) = 43.428. Temperature:25°C.; dynamic viscosity (in mPa s) = 24.247. Temperature:35°C.; dynamic viscosity (in mPa s) = 12.78. Temperature:45°C.; pure CAS 122-99-6: dynamic viscosity (in mPa s) = 41. Temperature:19.8°C. Remarks:Temperature in the range 19.5-20.2 °C. Viscosity independent of the shear rate.; dynamic viscosity (in mPa s) = 19. Temperature:40.5°C. Remarks:Temperature in the range 40-41 °C. Viscosity independent of the shear rate.; 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 <sup>2</sup> /s) = 830.2. Temperature:20°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 181.5. Temperature:40°C.; kinematic viscosity (in mm <sup>2</sup> /s) = 59.1. Temperature:60.0°C.
<b>Explosive properties</b>	no data available
<b>Oxidising properties</b>	no data available

## 9.2. Other information

no data available

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## 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

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

- Oral: pure CAS 57-55-6: LD50 - rat (male/female) - 22 000 mg/kg bw. Remarks: This value corresponds to 21.0 ml/kg bw, with standard errors of 19.2-23.9 ml/kg bw.; pure CAS 122-99-6: LD50 - rat (female) - 1 840 mg/kg bw.; 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 57-55-6: LC50 - rabbit - > 317 042 mg/m<sup>3</sup> air.; pure CAS 122-99-6: LC50 - rat (male/female) - > 1 000 mg/m<sup>3</sup> air (nominal); pure CAS 100-51-6: LC50 - rat (male/female) - > 4 178 mg/m<sup>3</sup> air.; pure CAS 102-71-6: LC0 - rat (male/female) - saturated TEA atmosphere (approximately 1.8 mg/m<sup>3</sup>).
- Dermal: pure CAS 57-55-6: LD50 - rabbit - > 2 000 mg/kg bw.; pure CAS 122-99-6: LD50 - rat (male/female) - 14 391 mg/kg bw.; 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

### STOT-single exposure

pure CAS 57-55-6: The substance is mildly irritating to the eyes and respiratory tract. Ingestion of large amounts could cause metabolic acidosis.; pure CAS 122-99-6: The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system and peripheral nervous system. This may result in impaired functions.; 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 122-99-6: The substance defats the skin, which may cause dryness or cracking. The substance may have effects on the central nervous system. This may result in impaired functions.; 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 57-55-6: No indication can be given whether a harmful concentration in the air will be reached.; pure CAS 122-99-6: A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.; 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.

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## SECTION 12: Ecological information

### 12.1. Toxicity

- Toxicity to fish: pure CAS 57-55-6: LC50 - *Oncorhynchus mykiss* (previous name: *Salmo gairdneri*) - 40 613 mg/L - 96 h.; pure CAS 122-99-6: LC50 - *Pimephales promelas* - 344 mg/L - 96 h.; 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 57-55-6: LC50 - *Ceriodaphnia dubia* - 18 340 mg/L - 48 h.; pure CAS 122-99-6: EC50 - *Daphnia magna* - > 500 mg/L - 48 h.; 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 57-55-6: EC50 - *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*) - 24 200 mg/L - 72 h.; pure CAS 122-99-6: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - > 500 mg/L - 72 h.; 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 57-55-6: NOEC - *Pseudomonas putida* - > 20 000 mg/L - 18 h.; pure CAS 122-99-6: EC20 - activated sludge of a predominantly domestic sewage - 620 mg/L - 30 min. Remarks: Respiration rate.; 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

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

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## 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: 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 and the IBC Code

no data available

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## 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
[Name confidential or not available]	Epoxy resin	24969-06-0	607-468-0
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Propane-1,2-diol	Propane-1,2-diol	57-55-6	200-338-0
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
2-phenoxyethanol	2-Phenoxy Ethanol	122-99-6	204-589-7
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
Benzyl alcohol	Benzyl alcohol	100-51-6	202-859-9
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
Chemical name	Common names and synonyms	CAS number	EC number
[Name confidential or not available]	Ci basic red49	12270-23-4	602-843-5
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Not Listed.
Chemical name	Common names and synonyms	CAS number	EC number
2,2',2''-nitrotriethanol	Triethanolamine	102-71-6	203-049-8
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.

### 15.2. Chemical safety assessment

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

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## 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](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.

<b>Acute Tox. 4,H302</b>	Acute toxicity - Oral, Category 4
<b>Skin Corr. 1,H314</b>	Skin corrosion, Category 1
<b>Eye Dam. 1,H318</b>	Serious eye damage, Category 1
<b>H302</b>	Harmful if swallowed.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.

## 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](mailto:sds@xixisys.com)**

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*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.*