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1-Identification of the substance/preparation and of the company/undertaking

• 1.1 Product identifier

Product name: Dye Ink

Product type/code: HI-BK218

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

Application of the substance/the preparation : Ink-Jet Printing

• 1.3 Details of the supplier of the safety data sheet

• 1.4 Emergency telephone number

- Oversea sales department: Tel: Fax:
- Emergency Phone:

## 2-Hazards Identification

#### • 2.1 Classification of the substance or mixture.

This product is not classified as hazard substance according to the EC Regulation 1272/2008(CLP).

#### • Regulation 1272/2008(CLP) and following amendments and adjustments.

Hazard classification and indication: --

#### • 2.2 Label elements

Hazard labelling pursuant to EC Regulation 1272/2008(CLP) and subsequent amendments and supplements.

Hazard pictograms:--

Signal words: --

Hazard statements: --

Precautionary statements:

- P101 If medical advice is needed have product container or label at hand.
- P102 Keep out of reach of children.



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#### • 2.3 Other hazards

Information not available.

## **3-Composition/Information on Ingredients**

• **3.1 Substances** Information not available.

#### • 3.2 Mixtures

Containing of the following components. The classification is mainly based on pure substance. The concentration of the substance in the mixture is very lower than the pure substance. The main substance in the mixture is water.

CAS No / EC No	Components / Formula / classification / Specific Conc. Limits, M-factors	Range of concentration	
	Black Dye		
Trade secret	/	0.1%-5%	
CAS: 56-81-5	Glycerol C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	0.10/ 50/	
EC: 200-289-5	/	0.1%-5%	
CAS: 107-21-1	Ethylene glycol C <sub>2</sub> H <sub>6</sub> O <sub>2</sub>	0.10/ 50/	
EC: 203-473-3	Acute Tox.4 H302	0.1%-5%	
CAS: 616-45-5	2-Pyrroli-Dinone C <sub>4</sub> H <sub>7</sub> NO	0.1%-5%	
EC: 210-483-1	Eye Irrit.2 H319,Repr.1B H360		
CAS: 7732-18-5	Water H <sub>2</sub> O	50% 00%	
	/	50%-90%	

### **4-First Aid Measures**

#### • 4.1 Description of first aid measures

In case of contact, ingestion or inhalation, the following general measures provided for a fist aid shall be taken.

• After eyes contact:



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Do not rub eyes. Immediately flush eyes with large amounts of clean, warm water (low pressure) for at least 15 minutes. If the irritation persists, seek medical advice.

#### • After skin contact:

Immediately wash affected areas with mild soap and water. If the irritation persists, seek medical advice.

#### • After ingestion:

Ingestion is not an expected route of exposure during normal use of the product. If ingested, seek medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

#### • After inhalation:

Remove to fresh air. If respiration is difficult, administer artificial respiration and seek medical advice.

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

No further relevant information available.

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

Follow doctor's orders.

## 5- Firefighting measures

#### • 5.1 Extinguishing media

• Suitable extinguishing media:

Dry chemical, carbon dioxide, water spray or regular foam.

• Extinguishing media which shall not be used for safety reasons: No Information Available.

#### • 5.2 Special hazards arising from the substance or mixture:

Product is a nonflammable water-based solution.

Hazardous combustion products (gases/vapors) produced in fire can include carbon monoxide, carbon

dioxide, nitrogen oxides, and smoke.

- Flash point and method: >93.3  $^{\circ}$ C (200 $^{\circ}$ F) Closed Cup
- Approximate Flammable Limits in Air ,% by Volume: Not available
- Autoignition Temperature: Not available
- 5.3 Advice for firefighters



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This product is not flammable. Use normal firefighting procedures for the area.

### 6-Accidental Release Measures

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

Wear appropriate personal protective measures, avoid contact eyes and skin. Keep unprotected persons

away.

#### • 6.2 Environmental precautions

The product must not penetrate the sewer system, surface water, ground water and neighbouring areas.

Avoid birds or fish ingestion from drainage system, please thoroughly recycle.

#### • 6.3 Methods and material for containment and cleaning up

Transfer the leaked products to container. Absorb with inert absorbent such as dry, sand or

diatomaceous earth, commercial sorbents, or recover using pumps.

Flush a small amount of residue with large amounts of water and detergent.

#### • 6.4 Reference to other sections

Any information about personal protection and disposal is given in sections 8 and 13.

## 7 - Handling and Storage

#### • 7.1 Information for safe handling

Wear appropriate personal protective measures, avoid contact eyes and skin.

Ventilation is well and far away from heat.

#### • Information about fire-and explosion protection

Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away. Do not smoke.

Protect against electrostatic charges.

- 7.2 Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and receptacles:

Keep away from excessively alternate heat and cold, direct sunniness.

Keep away from strong acid, strong base and strong oxidizing agent.



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Keep away from incompatible substance or mixtures.

Store in a cool, dry, ventilated area.

#### • Further information about storage conditions:

Keep container tightly sealed.

Keep out of the reach of children.

#### • 7.3 Specific end use(s)

No further relevant information available.

### 8-Exposure Controls, Personal Protection

#### • 8.1 Control parameters

No further relevant information available.

- 8.2 Exposure controls
- Information about design of technical facilities:

To provide proper ventilation, use adequate general or local exhaust ventilation.

#### • Ingredients with limit values that require monitoring at the workplace: No data available

- Personal protective equipment:
- Respiratory protection:

Respirators are not needed for normal use.

• Eye/Face protection:

Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of the material.

• Body protection:

If there is potential for significant dermal contact, wear appropriate impervious clothing and gloves.

## 9-Physical and Chemical Properties

- 9.1 Information on basic physical and chemical properties
- Physical state Liquid
- Colour Black



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	100	
• Odour	Slight	
Odour threshold	No data available	
<ul> <li>Melting point/freezing point:</li> </ul>		
Melting point	No data available	
Freezing point	No data available	
• Boiling point or initial boiling		
point and boiling range:	No data available	
• Flammability	No data available	
• Lower and upper explosion limit	No data available	
• Flash point	>93.3 $^\circ\!\mathrm{C}$ (>200 $^\circ\!\mathrm{F}$ ) Pensky-Martens Closed Cup	
<ul> <li>Auto-ignition temperature</li> </ul>	No data available	
Decomposition temperature	No data available	
• pH	7-9	
<ul> <li>Kinematic viscosity</li> </ul>	>1cp	
• Solubility	Soluble in water	
<ul> <li>Partition coefficient</li> </ul>		
n-octanol/water (log value)	No data available	
• Vapour pressure	No data available	
• Density and/or relative density:		
Density at 20 °C (68 °F)	1 g/cm <sup>3</sup> (>8.345 lbs/gal) SG: 1.3-1.8	
• Relative vapour density	No data available	
• Particle characteristics	Not applicable	
• 9.2 Other information		
• 9.2.1 Information with regard to physical hazard classes		
No further relevant information available.		
• 9.2.2 Other safety characteristics		

No further relevant information available.



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# 10-Stability and Reactivity

#### • 10.1 Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

#### • 10.2 Chemical stability

The product is stable in normal conditions of use and storage.

#### • 10.3 Possibility of hazardous reactions

Polymerization will not occur.

No hazardous reactions are foreseeable in normal conditions of use and storage.

#### • 10.4 Conditions to avoid

No further relevant information available.

#### • 10.5 Incompatible materials

No further relevant information available.

#### • 10.6 Hazardous decomposition products

No decomposition reaction occure in normal conditions of use and storage.

# 11-Toxicological Information

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

• Acute toxicity

Glycerol

PEL (OSHA):	None Established
TLV (ACGIH):	None Established
LD50 (rat, oral) :	27 200 mg/kg (RTECS)
LC50 (rat, inhalation/4 hr.):	5.85 mg/L air
Ethylene glycol	
PEL (OSHA) :	None Established
TLV (ACGIH) :	None Established
LD50 (rat, oral) :	7 712 mg/kg (RTECS)
LC50 (rat, inhalation/4 hr.) :	No data available



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2-Pyrroli-Dinone	
PEL (OSHA) :	None Established
TLV (ACGIH) :	None Established
LD50 (rat, oral) :	2 000 mg/kg (RTECS)
LC50 (rat, inhalation/4 hr.) :	No data available
WATER	
PEL (OSHA) :	None Established
TLV (ACGIH) :	None Established
LD50 (rat, oral) :	No data available
LC50 (rat, inhalation/4 hr.):	No data available

#### • Skin corrosion/irritation

Does not meet the classification criteria for this hazard class.

• Serious eye damage/irritation

Does not meet the classification criteria for this hazard class.

• Respiratory or skin sensitisation:

Does not meet the classification criteria for this hazard class.

• Germ cell mutagenicity

Does not meet the classification criteria for this hazard class.

• Carcinogenicity

Does not meet the classification criteria for this hazard class.

• Reproductive toxicity

Does not meet the classification criteria for this hazard class.

• STOT-single exposure

Does not meet the classification criteria for this hazard class.

• STOT-repeated exposure

Does not meet the classification criteria for this hazard class.

• Aspiration hazard

Does not meet the classification criteria for this hazard class.

#### • 11.2 Information on other hazards



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• Endocrine disrupting properties

None of the ingredients is listed.

• Other information

No further relevant information available.

# 12-Ecological Information

#### • 12.1 Toxicity

No further relevant information available.

• 12.2 Persistence and degradability

No further relevant information available.

• 12.3 Bioaccumulative potential

No further relevant information available.

• 12.4 Mobility in soil

No further relevant information available.

• 12.5 Results of PBT and vPvB assessment

No further relevant information available.

• 12.6 Endocrine disrupting properties

No further relevant information available.

- 12.7 Other adverse effects
- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage

system.

# 13-Disposal Considerations

#### • 13.1 Waste treatment methods

• Product:

Do not discharge into environment, directly. Disposal must be performed through an authorized waste management firm, in compliance with national and local regulations.



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### Package

Contaminated or damaged package must be recovered or disposed of in compliance with national waste management regulations.

# 14-Transport Information

• 14.1 UN number or ID number	Not applicable.
• 14.2 UN proper shipping name	Not applicable.
• 14.3 Transport hazard class(es)	Not applicable.
• 14.4 Packing group	Not applicable.
<ul> <li>14.5 Environmental hazards</li> </ul>	Not applicable.
• 14.6 Special precautions for user	Not applicable.

• 14.7 Maritime transport in bulk according to IMO instruments Information not relevant.

# 15-Regulatory Information

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

CLP category None

Restrictions relating to the product or contained substances pursuant to Table 3.1 to EC

Regulation 1272/2008(CLP) None

Substances in Candidate List(SVHC in REACH) None

• 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

# 16-Additional Information

#### • Other information:

This SDS was prepared in accordance with CLP Regulation (EC) No.1272/2008, EU No 2015/830, EC No 1907/2006, REACH, GB/T16483-2008 and GB13690-2009.

• Disclaimer:

The data in this Safety Data Sheet relates only to the specific material designated herein and



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does not relate to use in combination with any other material or in any process.

- Abbreviations and acronyms:
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - CAS: Chemical Abstracts Service
  - CLP: Classification, Labeling and Packaging of substances and mixtures
  - SVHC: Substances of Very High Concern
  - REACH: Registration, Evaluation, Authorization and Restriction of Chemicals
  - **DOT:** Department of transportation
  - **EC:** Effective concentration
  - EC50: Effective concentration, 50 percent
  - EINECS: European Inventory of Existing Chemical Substance
  - IAIA: International Association for Impact Assessment
  - ICAO: International Civil Aviation Organization
  - IMO: International Maritime Organization
  - IMDG: International Maritime Dangerous Goods
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - **NOEC:** No Observed Effect Concentration
  - **OSHA:** Occupational Safety and Health Administration (U.S.A.)
  - STEL: Short Term Exposure Limit
  - TWA: Time Weighted Average
  - TLVTN: Threshold Limit Value
  - **VOC:** Volatile Organic Compounds