

Safety Data Sheet

HI-GY249

Information Sheet

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Date of issue: 6/6/2019

Revised: 15/7/2025

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

- **1.1 Product identifier**

Product name: Dye Ink

Product type/code: HI-GY249

- **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**

2-Hazards Identification

- **2.1 Classification of the substance or mixture:**

This product is not classified as hazard substance according to Regulation (EC) No 1272/2008 (CLP).

- **Regulation (EC) No 1272/2008 (CLP) and following amendments and adjustments.**

Hazard classification and indication: --

- **2.2 Label elements**

Hazard labelling pursuant to Regulation (EC) No 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

Results of PBT and vPvB assessment: The mixture does not contain any substance which meet the criteria for PBT or vPvB in accordance with Annex XIII of the Regulation (EC) No.1907/2006 (REACH) as amended.

Results of endocrine disruptor: The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in the Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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
Trade secret	Black Dye	0.1%-5%
	/	
CAS: 56-81-5 EC: 200-289-5	Glycerol C ₃ H ₈ O ₃	1%-10%
	/	
CAS: 107-21-1 EC: 203-473-3	Ethylene glycol C ₂ H ₆ O ₂	1%-10%
	Acute Tox. 4 H302	
CAS: 112-34-5 EC: 203-961-6	Diethylene glycol monobutyl ether C ₈ H ₁₈ O ₃	0.1%-9%
	Eye Irrit.2 H319	
CAS: 57-13-6 EC: 200-315-5	Urea CH ₄ N ₂ O	0.1%-9%
	/	
CAS: 7732-18-5	Water H ₂ O	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 first aid shall be taken.

• After eyes contact:

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.

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Hazardous combustion products (gases/vapors) produced in fire can include carbon monoxide, carbon dioxide, nitrogen oxides, and smoke.

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

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.

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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.

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**

Ingredients with limit values that require monitoring at the workplace:

Diethylene glycol monobutyl ether (112-34-5)	
IOELV	Short-term value: 101.2 mg/m ³ 15 ppm
	Long-term value: 67.5 mg/m ³ 10 ppm
Ethylene glycol (107-21-1)	
IOELV	Short-term value: 104 mg/m ³ 40 ppm
	Long-term value: 52 mg/m ³ 20 ppm

Additional information: The lists valid during the making were used as basis.

- **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

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- **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** Gray

- **Odour** Slight

- **Odour threshold** No data available

- **Melting point/freezing point:**

- **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°C (>200°F) Pensky-Martens Closed Cup

- **Auto-ignition temperature** No data available

- **Decomposition temperature** No data available

- **pH** 7-9

- **Kinematic viscosity** >1cp

- **Solubility** Soluble in water

- **Partition coefficient**

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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 ³ (>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.	

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 occurs in normal conditions of use and storage.

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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

Diethylene glycol monobutyl ether

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : No data available

LC50 (rat, inhalation/4 hr.) : No data available

Urea

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : 14 300 - 15 000 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

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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**

- **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**

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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.

- **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. |
| • 14.5 Environmental hazards | Not applicable. |
| • 14.6 Special precautions for user | Not applicable. |

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- **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) 2020/878, 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 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

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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