

Substance Key: 000BI15B0002

Revision Date: 10/09/2008

Section 1 – Product and Company Identification

Product Name: HI-BK424(PG)
Product Use: Ink-Jet Printing Ink

Company Identification:**MANUFACTURER**

Ninestar Technology Co., Ltd.
No. 63, Mingzhubei Road, Xiangzhou District
Zhuhai, Guangdong, P. R.
China 519075

Overseas sales department:**Tel:** +86 756 8539388**Fax:** +86 756 8539389**Emergency call:** +86 800- 830- 7918 (24 hours hotline)**Section 2 - Composition, Information on Ingredients****Components (% by weight)**

| COMPONENTS | PERCENTAGE/BOTTLE | CAS# |
|------------------------------------|-------------------|------------|
| Diethylene glycol | 0%-9% | 111-46-6 |
| Isopropanol | 0%-5% | 67-63-0 |
| Glycerol | 0%-10% | 56-81-5 |
| Dipropylene glycol monobutyl ether | 0%-9% | 143-22-6 |
| 2-Pyrrolidone | 0%-15% | 616-45-5 |
| Polyethylene glycol 400 | 0%-10% | 25322-68-3 |
| 1,4-Butylene glycol | 0%-9% | 110-63-4 |
| Ethylene glycol | 0%-15% | 107-21-1 |
| Water | 60%-85% | 7732-18-5 |

Dye component Black

Chemical family Carbon black

Components (Remarks)

*The specific identity for each component not identified by a CAS Registry Number is withheld as a trade secret.

Section 3 – Hazards Identification

Potential Health Effects

THIS PRODUCT CAN BE USED SAFELY WHEN USED AS DIRECTED AND WHEN APPLICABLE SAFETY PRECAUTIONS ARE FOLLOWED.

POTENTIAL HEALTH EFFECTS FROM PRODUCT

Potential routes of overexposure to this product are skin contact, eye contact and inhalation of vapor.

Ingestion is not expected to be a significant route of exposure for this product under normal use conditions.

There is no toxicity data available for this specific formulation. Any potential hazards are presumed to be due to exposure to the components.

ADDITIONAL HEALTH EFFECTS

Since this mixture has not been tested as a whole to determine the hazards by all routes of exposure, information is provided for each hazardous component of the mixture to meet requirements of OSHA's Hazard Communication Standard (29 CFR 1910.1200). The effects noted occur from exposure to the pure component unless other noted.

INFORMATION FOR COMPONENTS

Diethylene glycol

Eye Contact - May cause eye irritation.

Skin Contact - May cause skin irritation.

Effects of Overexposure - Excessive exposure may cause gastrointestinal disturbances, nausea, headache and vomiting.

Isopropanol

Eye Contact - Contact with eyes may result in irritation.

Skin Contact - Contact with the skin may result in irritation.

Inhalation - Inhalation may result in respiratory irritation.

Ingestion - Ingestion may result in gastric disturbances.

Chronic Overexposure Effects - Developmental toxicity was seen in the offspring of rats at doses that were maternally toxic.

Glycerol

Eye Contact - May cause eye irritation.

Skin Contact - May cause skin irritation.

Effects of Overexposure - Excessive exposure may cause gastrointestinal disturbances, nausea, headache and vomiting.

Dipropylene glycol monobutyl ether

Eye Contact - May cause eye irritation.

Skin Contact - May cause skin irritation.

Effects of Overexposure - Excessive exposure may cause gastrointestinal disturbances, nausea, headache and vomiting.

2-Pyrrolidone

Eye Contact - Contact with eyes may result in irritation.

Skin Contact - Contact with the skin may result in irritation.

Inhalation - Inhalation may result in respiratory irritation.

Ingestion - Ingestion may result in gastric disturbances.

Polyethylene glycol 400

Eye Contact - May cause eye irritation. Symptoms of exposure may include eye irritation or burning sensation.

Skin Contact - Prolonged or repeated contact may dry skin and cause irritation. Symptoms of exposure may include drying, cracking or inflammation of skin.

Inhalation - May cause respiratory tract irritation. Symptoms of exposure may include nasal discharge, hoarseness, coughing, chest pain and breathing difficulty.

Ingestion - Essentially non-toxic.

1,4-Butylene glycol

Eye Contact - May cause eye irritation.

Skin Contact - Contact with the skin may result in irritation.

Effects of Overexposure - Excessive exposure may cause gastrointestinal disturbances, nausea, headache and vomiting.

Ethylene glycol

Eye Contact - Contact with eyes may result in irritation.

Skin Contact - Contact with the skin may result in irritation.

Inhalation - Inhalation may result in respiratory irritation.

Ingestion - Ingestion may result in gastric disturbances.

Chronic Overexposure Effects - Developmental toxicity was seen in the offspring of rats at doses that were maternally toxic.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or other as a carcinogen.

Section 4 - First Aid Measures

First Aid

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes in case of contact. Call a physician.
- Skin:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Wash clothing before reuse.
- Ingestion:** Ingestion is not an expected route of exposure during normal use of the product. If ingested, consult a physician.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Section 5 - Fire Fighting Measures

Flammable Properties

Flash Point: >93.3 °C (>200 °F)

Method : Closed Cup

Approximate Flammable Limits in Air, % by Volume

LEL : Not available

UEL: Not available

Autoignition Temperature: Not available

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.

Extinguishing Media

Use media appropriate for surrounding material.

Fire Fighting Instructions

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

Section 6 - Accidental Release Measures

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Initial Containment

Dike spill

Spill Clean Up

Soak up with absorbent material.

Section 7 - Handling and Storage

Handling (Personnel)

Avoid contact with eyes, skin, or clothing.

Section 8 - Exposure Controls, Personal Protection

Personal Protective Equipment

EYE/FACE PROTECTION

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

RESPIRATORS

Respirators are not needed for normal use.

PROTECTIVE CLOTHING

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

Applicable Exposure Limits and Exposure Data

WATER

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >90 mL/kg (RTECS)

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

Diethylene glycol

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >12565mg/kg(RTECS)

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

Isopropanol

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >5.47g/kg(RTECS)

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

Glycerol

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >5.2 g/kg(RTECS)

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

Dipropylene glycol monobutyl ether

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >14.3g/kg(RTECS)

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

2-Pyrrolidone

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >5000mg/kg(RTECS)

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

Polyethylene glycol 400

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >384000mg/kg(RTECS)

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

1,4-Butylene glycol

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : 210~420mg/kg(RTECS)

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

Ethylene glycol

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

LD50 (rat, oral) : >13.7g/kg(RTECS)

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

Section 9 - Physical and Chemical Properties

Physical Data

Form : Liquid

Color : HI-BK424(PG)

Odor : Slight

Solubility in Water : Miscible

pH : 7~9

Specific Gravity : > 1

Other Information

Flash Point : >93.3 °C (>200 °F)

Method : Closed Cup

Approximate Flammable Limits in Air, % by Volume

LEL : Not Available

UEL : Not Available

Autoignition Temperature : Not Available

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Incompatibilities with Other Materials:

None reasonably foreseeable.

Decomposition:

Decomposition does not occur during normal use.

Polymerization:

Polymerization will not occur.

Section 11 - Toxicological Information

Animal Data

No data available for product.

Section 12 - Ecological Information

Ecotoxicity:

No data available for product.

Physical:

No information available.

Other:

No information available.

Section 13 - Disposal Considerations

Waste Disposal

DO NOT DISCARD INTO ANY SEWERS, INTO ANY BODY OF WATER, OR ON THE GROUND.

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local laws and regulations.

Section 14 - Transport Information

(Not meant to be all inclusive)

DOT (Domestic Surface) : Not regulated

ICAO/IATA (Air) : Not regulated

IMO/IMDG (Ocean) : Not regulated

Section 15 - Regulatory Information

U.S. Regulations

Federal Regulations

TSCA Inventory Status –

All components of this product are listed, or exempt from listing, on the TSCA 8(b) chemical inventory.

TSCA Section 12(b) Export Notification –

This product can contain: None

European Union Regulations

EU Inventory Status –

All components of this product are listed, or are exempt from listing, on the EINECS chemical inventory.

Transport Information –

This product is not classified as dangerous within the meaning of transport regulations.

Labeling –

This product does not need to be labeled in accordance with EC-Directive 1999/45/EC.

Section 16 - Additional Information

HMIS[®] Rating

Health : 1

Flammability : 0

Reactivity : 0

The data in this Material 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.

MSDS Contact Information:

MANUFACTURER

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China 519075

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Key :

| | |
|-------------------|---|
| EU | European Union |
| HMIS [®] | Hazardous Material Information System (National Paint and Coatings Associatio |
| IEL | Indicative Exposure Limit (EU Directive 2000/39/EC) |
| LEL LFL | or Lower Explosive Limit or Lower Flammable Limit |
| NTP | National Toxicology Program (U.S.A.) |
| OEL | Occupational Exposure Limit |
| OSHA | Occupational Safety and Health Administration (U.S.A.) |
| PEL | Permissible Exposure Limit |