

LUSTRE®

Digital Inks

Materials Safety Data Sheet

General Environmental and Safety Information for Handling

1. Identification of the Substances and the Company

Product Name: Innova HD Black

General Use: Ink jet printing ink

Product Description: Water Based Dye Sublimation Ink

Manufacture Company Name: Lustre Kimya Sanayi Ticaret Limited Sirketi.

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2. Hazards Identification

2.1 Potential Acute Health Effects: Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of inhalation. Severe over-exposure can result in death.

2.2 Potential Chronic Health Effects: CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Non-mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

2.3 Classification of the substance or mixture Classification - REGULATION (EC) No 1272/2008

| | | | |
|--|------------|------|---|
| Acute toxicity (Oral) | Category 4 | H302 | Harmful if swallowed |
| Specific target organ toxicity - repeated exposure | Category 2 | H373 | May cause damage to organs through prolonged or |

| | | | |
|--------|--|--|---------------------------------|
| (Oral) | | | repeated exposure if swallowed. |
|--------|--|--|---------------------------------|

2.4 Classification according to EU Directives 67/548/EEC or 1999/45/EC

| | | |
|----|--------|---|
| Xn | R48/22 | Harmful: danger of serious damage to health by prolonged exposure if swallowed. |
|----|--------|---|

3. Composition/Information on Ingredients

| Ingredient Name | Cas | Concentration (%) |
|-----------------|------------|-------------------|
| Ethylene Glycol | 107-21-1 | 1 - 30 |
| Surfactant | 9014-85-1 | 1 - 20 |
| Disperse Dye | 17095-24-8 | 1 - 10 |
| Water | 7732-18-5 | 1 - 70 |

4. First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used. Serious Skin Contact: Not available. Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Medical Conditions Aggravated by Exposure: Persons with pre-existing kidney, respiratory, eye, or neurological problems might be more sensitive to The product. Notes to Physician: 1. Support vital functions, correct for dehydration and shock, and manage fluid balance. 2. The currently recommended medical management of The product poisoning includes elimination of The product and metabolites. Elimination of The product may be achieved by the following methods: a. Emptying the stomach by gastric lavage. It is useful if initiated within < 1 of ingestion. b. Correct metabolic acidosis with intravenous administration of

sodium bicarbonate, adjusting the administration rate according to repeated and frequent measurement of acid/base status. c. Administer ethanol (orally or by IV (intravenously)) or fomepizole (4-methylpyrazole or Antizol)) therapy by IV as an antidote to inhibit the formation of toxic metabolites. d. If patients are diagnosed and treated early in the course with the above methods, hemodialysis may be avoided if fomepizole or ethanol therapy is effective and has corrected the metabolic acidosis, and no renal failure is present. However, once severe acidosis and renal failure occurred, however, hemodialysis is necessary. It is effective in removing The product and toxic metabolites, and correcting metabolic acidosis.

Oral Exposure: If swallowed, wash out mouth with water provided person is conscious. Call a POISON CENTER or doctor.

Inhalation Exposure: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

5. Fire Fighting Measures Flammable Properties:

Not Flammable Extinguishing Media: carbon dioxide, regular dry chemical, water spray, alcohol resistant foam,

Unsuitable Extinguishing Media: None

Special Hazards Arising from the Chemical: Negligible fire hazard.

Hazardous Combustion Products: oxides of carbon

Fire Fighting Measures: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Avoid inhalation of material or combustion by-products.

Special Protective Equipment and Precautions for Firefighters: Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up: Eliminate all ignition sources if safe to do so. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for

later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

7. Handling and Storage

Precautions for Safe Handling: Obtain SDS (Safety Data Sheet) and printer's operation manual before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas/mist. Wash hands and eyes thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

Conditions for Safe Storage, including any Incompatibilities: Store and handle in accordance with all current regulations and standards. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Keep separated from incompatible substances.

8. Exposure controls/personal protection

Exposure Limit Values: Ethane-1,2-diol (107-21-1)

OSHA PEL: 50ppm Ceiling; 125mg/m³ Ceiling

ACGIH TLV-C: 100 mg/m³ Ceiling (aerosol only)

NIOSH: 50ppm Ceiling Mexico 100 mg/m³ Ceiling (aerosol)

In accordance with good industrial practices, handle with care and avoid personal contact.

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Hand: Protective gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling

9. Physical and Chemical Properties

Appearance - Physical State: liquid

Color: Black

Odor: slight odor

pH: 6-9

Boiling Point / Boiling Range: Not Available

Melting Point / Melting Range: Not Available

Flash Point: Not flammable

Relative Density: 1.0–1.5

Water Solubility: Soluble
Viscosity: 2-10 mPas (25 °C)

10. Stability and Reactivity

Stability: This is stable material

Incompatibilities: Avoid strong oxidizing agents, excessive heat. Avoid contact with incompatible materials.

Decomposition products: By high heat and fire: carbon dioxide and carbon monoxide.

Hazardous polymerization: Will not occur

11. Toxicological Information

Acute Toxicity: The component(s) of this material have been reviewed in various sources and the following selected endpoints are published: Ethane-1,2-diol (107-21-1)

Oral LD50 Rat 4700 mg/kg; Dermal LD50 Rabbit 10600mg/kg

Skin Corrosion / Irritation: mild irritation (GHS Classification: Not classified) Eye

Damage / Irritation: serious eye irritation (GHS Classification: Category 2)

Toxic to Reproduction: may damage fertility or the unborn child (GHS Classification: Category 1B)

Carcinogenicity: (GHS Classification: Not classified)

Component Carcinogenicity Ethane-1,2-diol (107-21-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Specific Target Organ Toxicity (Single Exposure): causes damage to central nervous system, kidneys, nervous system, heart, and respiratory system (GHS Classification: Category 1) Specific Target Organ

Toxicity (Repeated Exposure): Causes damage to central nervous system, kidneys, nervous system, heart, and respiratory system through prolonged or repeated exposure (GHS Classification: Category 1)

12. Ecological Information

Eco toxicity: Ethane-1,2-diol (107-21-1)

Mobility: No information available on the adverse effects

Persistence and Degradability: No information available on the adverse effects

Bio Accumulative Potential: No information available on the adverse effects

Other Adverse Effects: No information available on the adverse effects

13. Disposal Considerations

Waste disposal method: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

Contaminated Packaging: Empty containers may contain product residue. Dispose in accordance with all applicable regulations. Do not heat or cut empty containers with electric or gas torch.

14. Transport Information

UN number: Not regulated for transport

UN proper shipping name Proper Shipping Name (ADR) : Not applicable Proper

Shipping Name (IMDG) : Not applicable Proper Shipping Name (IATA) : Not applicable

Transport hazard class(es)

ADR

Transport hazard class(es) (ADR): Not applicable

IMDG

Transport hazard class(es) (IMDG): Not applicable

IATA

Transport hazard class(es) (IATA): Not applicable

Packing group (ADR): Not applicable

Packing group (IMDG): Not applicable

Packing group (IATA): Not applicable

Environmental hazards

Dangerous for the environment: No

Marine pollutant: No

Other information: No supplementary information available

Special precautions for user

- Overland transport: No data available

- Transport by sea: No data available

- Air transport: No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

15. Regulatory Information

This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ethane-1,2-diol (107-21-1)

SARA 313: 1.0 % de Minimis concentration

CERCLA: 5000 lb. final RQ; 2270 kg final

RQ

16. Other Information

SDS EU (REACH Annex II) This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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