MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product Name : LYRECO GEL INK PEN BLACK

Product Description : Black liquid and slight odor

Use of the Substance/Preparation : For industrial use only

Contact data: LYRECO - Rue du 19 mars 1962 – 59770 Marly – France Tel: +33(0) 3 27 23 64 00. In Case of Emergency call : 0044 20 8882 8734

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a preparation.

Hazardous Component(s)

* Ammonia is derived from aqueous ammonia.

3. HAZARDOUS IDENTIFICATION

EC Classification : Not classified as a dangerous preparation. 2,2',2"-nitrilotriethanol 102-71-6 203-049-8 <5 - -R10, R23, R34, R50 Ammonia 7664-41-7 215-647-6 < 0.5 Component(s) CAS No. EU No. Date of Issue: Jul.13, 2010 - - Carbon black R-phrase(s) Page:1/4 %(W/W) R22 Symbol(s) Xn T, C, N 20-301333-86-4 215-609-9 Isopropyl alcohol <1 F, Xi F11,R36, R67 Ethylene glycol 107-21-1 203-473-3 14-16 <1 XN, Xi R22, R48/22, R38, R41 Diethanolamine 67-63-0 111-42-2 200-661-7 203-868-0 EC Classification : Not classified as a dangerous preparation. Risk Phrases : Not assigned.

4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention. Ingestion : Induce vomiting immediately by medical personnel. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.

Skin Contact : Remove contaminated clothing. Wash skin with plenty of soap and water for at least 15 minutes. If symptoms develop, obtain medical attention.

Eye Contact : Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain medical attention.JOY BLACK LHF-30S

5. FIRE-FIGHTING MEASURES

Clear fire area of all non-emergency personnel. Specific Hazards : Containers may explode when involved in a fire. Extinguishing Media : Dry chemical, foam or carbon dioxide may be used. Unsuitable Extinguishing media : Not available Protective Equipment for : Wear full protective clothing and self-contained breathing apparatus Firefighters complying with an approved standard with full facepiece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations. Personal Protection : Wear appropriate personal protective equipment. Cleaning up Methods : Remove all sources of ignition. Use non-sparking tools and equipment. Avoid release to the environment. Absorb spillage with an inert material, then place in a chemical waste container for later safe disposal. Earth may be shoveled to contain spillage and to avoid contamination of sewers and watercourses.

7. HANDLING AND STORING

Handling : Avoid contact with eyes, skin and clothing. Keep container closed. Only use in well ventilated areas. Wash thoroughly after handling.

Handling temperature: Below 30°C and above 0°C.

Storing : Keep container tightly closed until ready for use. Store in a cool, dry, well-ventilated place away from acids, and oxidizing materials.

Storing temperature: Below 30°C and above 0°C.

Storing temperature: Below 30° C and above 0° C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures : Provide adequate ventilation. Local exhaust ventilation is recommended. Hand Protection : Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. Eye Protection : Safety eyewear complying with an approved standard should be used to avoid exposure to liquid splashes, mists, gases, or dust. Protective Clothing : Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant. Occupational Exposure Limits : Ammonia 7664-41-7 TWA 17mg/m3 ACGIH TLV Source Value(mg/m3) Ethylene glycol 107-21-1 STEL 100mg/m3 (aerosol)(ceiling) ACGIH TLV Component(s) CAS No.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid Color : Black Odor : Slight odor Boiling Point : Not available Melting Point : Not available Flash Point : Not applicable Explosion Limits : Not available Vapor Pressure : Not available Water Solubility : Miscible at any rate Auto-Ignition Temperature : Not available

10. STABILITY AND REACTIVITY

Stability : Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid : Heat, flames, ignition sources, and incompatibles.
Materials to Avoid : Strong acids, bases, strong oxidizing agents.
Hazardous Decomposition : Carbon dioxide and carbon monoxide may form when heated to Products decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity : LD50: 4,700mg/kg, Rat (as Ethylene glycol) LD50: 350mg/kg, Rat (as Ammonia) Acute Inhalation Toxicity : Not available Acute Dermal Toxicity : LD50: 9,530mg/kg, Rabbit (as Ethylene glycol) Acute Dermal Toxicity : LD50: 9,530mg/kg, Rabbit (as Ethylene glycol) Skin Irritation : May cause skin irritation. Eye Irritation : May cause eye irritation.

Respiratory Irritation : May cause respiratory irritation. Sensitization : Not available Mutagencity : Not available Carcinogenicity : Carbon black is classified as group 2B (Possible for human.) by IARC.

12. ECOLOGICAL INFORMATION

Further Information : There is no data available for this product.

13. DISPOSAL CONSIDERATIONS

Product : Do not dump this material into sewers, on the ground or into any body of water. Comply with all relevant regulations. Contact an accredited disposal contractor for the special advice.

14. TRANSPORT INFORMATION

UN-No : Not applicable Class : Not applicable

15. REGULATORY INFORMATION

Please refer to any other national measures that may be relevant. Hazard Symbol(s) : Not assigned EC Classification : Not classified as a dangerous preparation. Risk Phrases : Not assigned Safety Phrases : Not assigned

16. OTHER INFORMATION

Uses and Restrictions : Use only in industrial manufacturing processes. Disclaimer : The information in this document 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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