

SECTION 1: IDENTIFICATION

MANUFACTURER: Clover Technologies EMERGENCY NUMBER: (502) 736-1400

ADDRESS: 4621-A Proximity Drive Information Number: (502) 736-1400

Louisville, KY 40213 DATE OF REVISION: March 15, 2006

SECTION 2: PRODUCT COMPONENTS

| INGREDIENTS | CAS#. | Cyan WT.% | Magenta WT.% | Yellow WT.% |
|-----------------------------------|-------------|-----------|--------------|-------------|
| 2-Pyrrolidone | 616-45-5 | | | 1 - 10 |
| Gylcerin | 56-81-5 | | | 1 - 10 |
| 1,4 Butanediol | 110-63-4 | | | 1 - 10 |
| Surfactant | Proprietary | | | 1 – 5 |
| Diethylene Glycol | 111-46-6 | 10 - 20 | 10 - 20 | |
| Diethylene Glycol Monobutyl Ether | 112-34-5 | 1 - 5 | 1 - 5 | |

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product contains cyan (blue), magenta (red), and yellow liquids with a mild odor.

CYAN AND MAGENTA CAUTION! May cause eye and skin irritation. May be absorbed through the skin to cause effects similar to inhalation. Inhalation of vapors may cause irritation, headache, nausea and central nervous system effects. Prolonged overexposure may cause damage to the liver and kidneys. Harmful if swallowed. Aspiration during swallowing or vomiting may cause lung damage.

YELLOW CAUTION! May cause mild eye and skin irritation. Inhalation of vapors or mists may cause irritation, headache, dizziness and other central nervous system effects. Swallowing may cause kidney damage.

See Section 11 for detailed health effects information.

SECTION 4: EMERGENCY and FIRST AID PROCEDURES

INGESTION: Call a poison control center or doctor immediately for treatment advice. If conscious, give one 8 ounce glass of water to dilute. DO NOT induce vomiting unless directed by medical personnel. Do not give anything by mouth to or induce vomiting in a person who is unconscious or convulsing.

SKIN CONTACT: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation develops and persists. Launder contaminated clothing before reuse. Discard contaminated clothing such as shoes that cannot be decontaminated.

EYE CONTACT: Flush Flush eyes with water for 15 minutes while lifting the upper and lower lids. Get medical attention. **INHALATION:** Remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult have qualified personnel administer oxygen. Get medical attention.



SECTION 5: FIRE and EXPLOSION HAZARD DATA

FLASH POINT: None AUTOIGNITION TEMPERATURE: Not available

FLAMMABLE LIMITS: (vol % in air) LEL: 0.8% (diethylene glycol monobutyl ether)

UEL: 24.6% (diethylene glycol monobutyl ether)

EXTINGUISHING MEDIA: Use alcohol foam, carbon dioxide and dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear full emergency equipment and NIOSH approved

positive pressure self-contained breathing apparatus. Cool fire exposed containers and structures with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide and carbon dioxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear appropriate protective clothing as described in Section 8. Dike spill and absorb with an inert material. Collect into closable containers for proper disposal. Report spill as required by local and federal regulations.

SECTION 7: HANDLING and STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Protect containers from physical damage. Store in a cool (68°F), dry area away from oxidizers and other incompatible materials.

Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Use with adequate ventilation. Remove and launder contaminated clothing before re-use. Wash thoroughly after handling and before eating, drinking, smoking or using toilet facilities.

SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

| INGREDIENTS | CAS#. | EXPOSURE LIMITS |
|-----------------------------------|-------------|---|
| 2-Pyrrolidone | 616-45-5 | None Established |
| Glycerin | 56-81-5 | 5 mg/m ³ TWA OSHA PEL (respirable fraction |
| | | 10 mg/m ³ TWA ACGIH TLV |
| 1,4 Butanediol | 110-63-4 | None Established |
| Surfactant | Proprietary | None Established |
| Diethylene Glycol | 111-46-6 | 10 mg/m ³ TWA AIHA WEEL |
| Diethylene Glycol Monobutyl Ether | 112-34-5 | None Established |

EXPOSURE LIMITS: Use in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT: Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

PROTECTIVE CLOTHING: Use personal protective equipment to minimize exposure to skin and eye.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

BOILING POINT (@760 mmHg): 212°F FREEZING POINT: Not available

SPECIFIC GRAVITY ($H_20=1$): 1.00 – 1.10 COEFFICIENT of WATER/OIL: Not available

VAPOR PRESSURE: 17.5 mmHg EVAPORATION RATE: < Butyl Acetate

pH: 5.5 - 8.0

VAPOR DENSITY (Air=1): Heavier than air

SOLUBILITY IN WATER: Complete

APPEARANCE: Cyan, Magenta, and Yellow liquids.



SECTION 10: STABILITY and REACTIVITY

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY: Strong oxidizing agents, strong acids, strong bases and hydrogen peroxide.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield carbon monoxide, carbon dioxide,

nitrogen oxides, aldehydes, acrolein and tetrahydorfuran. **HAZARDOUS POLYMERIZATION:** Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: May cause mild irritation with redness and tearing

SKIN CONTACT: Contact may cause mild skin irritation.

INHALATION: Vapors or mists may cause respiratory irritation with headache, dizziness, nausea, drowsiness, incoordination, euphoria, visual disturbances, fatigue and unconsciousness.

INGESTION: Swallowing may cause gastrointestinal irritation, nausea, vomiting, diarrhea, severe metabolic acidosis, and damage to the kidneys and liver. Aspiration into the lungs during swallowing or vomiting may cause lung damage.

CHRONIC EFFECTS of OVEREXPOSURE: Prolonged exposure may cause dermatitis. Prolonged or repeated over exposure may cause damage to the kidneys or liver. Diethylene glycol has been found to be positive in the Ames Assay for mutagenicity. 2-pyrrolidione was found to cause birth defects in studies with laboratory animals.

CARCINOGENICITY: None of the components of this products are listed as a carcinogen by NTP, IARC or OSHA.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with chronic skin, respiratory, kidney and liver disorders may be at increased risk from exposure to this material.

TOXICOLOGY DATA: Toxicity values for this chemical are:

2-Pyrrolidone: Oral rat LD₅₀: 6,500 mg/kg

Glycerin: Oral rat LD₅₀: 12,600 mg/kg

Skin rabbit LD₅₀: >10,000 mg/kg

Inhalation rat LC₅₀: >570 mg/m³/1 hour

1,4 Butanediol: Oral rat LD₅₀ 1,830 mg/kg

Surfactant: Oral rat LD₅₀ 6,300 mg/kg

Inhalation rat LC₅₀: >2 mg/L/1 hour

Skin rabbit LD₅₀: >2,000 mg/kg

Diethylene Glycol: Oral rat LD₅₀: 12,565 mg/kg

Skin rabbit LD₅₀: 11,890 mg/kg

Diethylene Glycol Monobutyl Oral rat LD₅₀: 5,660 mg/kg

Ether:

SECTION 12: ECOLOGICAL INFORMATION

2-Pyrrolidone: EC₅₀/48 hour daphnia magna >500 mg/l

 $LC_{50}/48$ hour golden orfe > 500 mg/l

Glycerin: No data available 1,4 Butanediol: No data available

Surfactant: 50/72 hour selenastrum capricornutum 93 mg/l

Diethylene Glycol: No data available

Diethylene Glycol Monobutyl LC₅₀/24 hr Goldfish 2700 mg/l

Ether:

LC₅₀/96 hour Menidia beryllina 2000 ppm



SECTION 13: DISPOSAL INFORMATION

WASTE DISPOSAL METHOD: Dispose of in accordance with all local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

DOMESTIC TRANSPORTATION

DOT SHIPPING NAME: Not Regulated

DOT HAZARD CLASSIFICATION: Not Regulated

DOT LABELS REQUIRED (49CFR172.101): Not Applicable

UN NUMBER: None

INTERNATIONAL TRANSPORTATION

IMDG SHIPPING NAME: Not Regulated

IMDG CLASS: Not Regulated UN NUMBER: Not Applicable

IMDG LABEL: None

SECTION 15: REGULATORY INFORMATION

OSHA HAZARD CLASSIFICATION: Irritant, target organ effects **EPA SARA 311 HAZARD CLASSIFICATION:** Acute health

SARA TITLE 111 SECTION 313 INFORMATION: This product contains the following chemicals that are regulated under

SARA 313:

COMPONENT CAS # WT% Glycol Ethers N/A 1 - 5%

(Diethylene Glycol Monobutyl Ether)

CERCLA HAZARDOUS SUBSTANCE (40CFR 116): Not applicable

REPORTABLE QUANTITY: Not applicable

CALIFORNIA PROPOSITION 65 INFORMATION: This product contains no California Proposition 65 regulated

chemicals.

WHMIS CLASSIFICATION: Class D - Division 2 - Subdivision B (Toxic material causing other chronic effects)

SECTION 16: OTHER INFORMATION

NFPA Rating: Health = 1 Fire = 0 Reactivity = 0 **HMIS Rating:** Health = 1 Fire = 0 Reactivity = 0