



MATERIAL SAFETY DATA SHEET

REMANUFACTURED HP 51645

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#.	WT. %
2-Pyrrolidone	616-45-5	5-10
1,4 Butanediol	110-63-4	1-5
Carbon Black	1333-86-4	1-10

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a black liquid with a mild odor.

WARNING! Eye and skin irritant. May be absorbed through the skin to cause effects similar to inhalation. Inhalation of vapors may cause eye irritation, headache, nausea, confusion and abdominal pain. Ingestion may cause gastrointestinal irritation and other harmful effects.

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 until no traces of the chemical remains. Get medical attention if irritation develops or persists. Launder contaminated clothing before reuse. Discard contaminated clothing such as shoes that cannot be decontaminated.

EYE CONTACT: 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: Not applicable UEL: Not available

EXTINGUISHING MEDIA: Use media appropriate to the surrounding fire.

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, carbon dioxide, tetrahydrofuran and oxides of nitrogen.



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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 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, 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
1,4 Butanediol	110-63-4	None Established
Carbon Black	1333-86-4	3.5 mg/m ³ TWA OSHA PEL 3.5 mg/m ³ TWA ACGIH TLV

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): 215°F / 101°C

SPECIFIC GRAVITY (H20=1): 1.00 - 1.10

VAPOR PRESSURE: 17.5 mmHg

VAPOR DENSITY (Air=1): Heavier than air

SOLUBILITY IN WATER: Complete

APPEARANCE AND ODOR: Black liquid with a mild odor.

FREEZING POINT: Not available

COEFFICIENT of WATER/OIL: Not available

EVAPORATION RATE: < Butyl Acetate

pH: 7.5-8.5

SECTION 10: STABILITY and REACTIVITY

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: None known.

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

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield carbon monoxide, carbon dioxide, tetrahydrofuran, and nitrogen oxides.

HAZARDOUS POLYMERIZATION: Will not occur.



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SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: May cause irritation with redness, pain and blurred vision.

SKIN CONTACT: Prolonged contact may cause skin irritation with redness, swelling and cracking. Widespread contact may cause absorption with symptoms similar to inhalation.

INHALATION: Vapors or mists may cause upper respiratory tract irritation with coughing, headache, nausea, confusion and giddiness.

INGESTION: Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Large amounts may cause narcosis, incoordination and damage the kidneys.

CHRONIC EFFECTS of OVEREXPOSURE: Prolonged or repeated exposure may cause dermatitis. 2-pyrrolidone has been found to cause birth defects in studies with laboratory animals. Carbon black has been found to be mutagenic in some test systems.

CARCINOGENICITY: Carbon black is listed as "Possibly Carcinogenic to Humans" (Group 2B) by IARC.

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

TOXICOLOGY DATA: Toxicity values for this chemical are:

2-Pyrrolidone:	Oral rat LD ₅₀ 6,500 mg/kg
1,4 Butanediol:	Oral rat LD ₅₀ 1,525 mg/kg
Carbon Black:	Oral rat LD ₅₀ >15400 mg/kg
	Skin rabbit LD ₅₀ >3 gm/kg

SECTION 12: ECOLOGICAL INFORMATION

2-Pyrrolidone:	EC ₅₀ /48 hour daphnia magna >500 mg/l
	LC ₅₀ /48 hour golden orfe >500 mg/l
1,4 Butanediol:	No data available
Carbon Black:	LC ₅₀ /96 hour fathead minnow >100 mg/l
	EC ₅₀ /24 hour daphnia magna >1,000 mg/l

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



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SECTION 15: REGULATORY INFORMATION

OSHA HAZARD CLASSIFICATION: Irritant, target organ effects

EPA SARA 311 HAZARD CLASSIFICATION: Acute health, chronic health

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

COMPONENT	CAS #	WT%
None		

CERCLA HAZARDOUS SUBSTANCE (40CFR 116): Not applicable

REPORTABLE QUANTITY: Not applicable

CALIFORNIA PROPOSITION 65 INFORMATION: This product contains carbon black. California lists carbon black (airborne, unbound particles of respirable size) as known to cause cancer. This product contains no unbound carbon black. Therefore no warning is required.

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

SECTION 16: OTHER INFORMATION

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

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