



MATERIAL SAFETY DATA SHEET
REMANUFACTURED CANON CLI-221 Bk

SECTION 1: IDENTIFICATION

MANUFACTURER:	Clover Technologies Group	EMERGENCY NUMBER:	(815) 431-8100
ADDRESS:	4200 Columbus St Ottawa, IL 61350	INFORMATION NUMBER:	(815) 431-8100
		DATE OF REVISION:	May 14, 2014

SECTION 2: PRODUCT COMPONENTS

INGREDIENTS	CAS#.	WT. %
2-Pyrrolidone	Trade Secret	5 – 10
Diethylene Glycol mono butyl ether	Trade Secret	1 – 5
Diethylene Glycol	Trade Secret	5 – 10
Glycerin	Trade Secret	1 – 5

Refer to Section 8 for occupational exposure limits.

SECTION 3: HAZARDS IDENTIFICATION

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

CAUTION! May cause 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. May be absorbed through the skin to cause effects similar to inhalation. Aspiration during swallowing or vomiting may cause lung 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 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 mono butyl ether)
UEL: 24.6%(Diethylene glycol mono butyl 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.



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HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, carbon dioxide, tetrahydrofuran and oxides of nitrogen.

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
Diethylene Glycol Mono Butyl Ether	112-34-5	None Established
Diethylene Glycol	111-46-6	10 mg/m ³ TWA AIHA WEEL
Glycerin	56-81-5	5 mg/m ³ TWA OSHA PEL (respirable fraction) 10 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 eyes.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

BOILING POINT (@760 mmHg): 212°F

SPECIFIC GRAVITY (H₂O=1): 1.00 – 1.10

VAPOR PRESSURE: 17.5 mmHg

VAPOR DENSITY (Air=1): Heavier than air

SOLUBILITY IN WATER: Complete

APPEARANCE: Black liquid

FREEZING POINT: Not available

COEFFICIENT of WATER/OIL: Not available

EVAPORATION RATE: < Butyl Acetate

pH: 7.0-8.5

SECTION 10: STABILITY and REACTIVITY

STABILITY: Stable.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY: Strong oxidizing agents, strong acids, strong bases, 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 mild irritation with redness and pain.

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

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

INGESTION: Swallowing may cause gastrointestinal irritation, nausea, vomiting, diarrhea, narcosis, constriction of the pupils, increased blood sugar levels, loss of reflexes, severe metabolic acidosis and damage to the kidneys and liver

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

CARCINOGENICITY: None of the components of this product 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 LD ₅₀ : 6,500 mg/kg
Diethylene Glycol Mono Butyl Ether:	Oral rat LD ₅₀ : 5,660 mg/kg
Diethylene Glycol:	Oral rat LD ₅₀ : 12,565 mg/kg
	Skin Rabbit LD ₅₀ : 11,890 mg/kg
Glycerin:	Oral rat LD ₅₀ : 12,600 mg/kg
	Skin Rabbit LD ₅₀ : >10,000 mg/kg
	Inhalation Rat LC ₅₀ : >570 mg/m/1 hour

SECTION 12: ECOLOGICAL INFORMATION

2-Pyrrolidone:	EC ₅₀ /48 hr daphnia magna > 500 mg/l
	LC ₅₀ /48 hour golden orfe >500 mg/l
Diethylene Glycol Mono Butyl Ether:	LC ₅₀ /24 hour Goldfish 2700 mg/l
	LC ₅₀ /96 hour Menidia Beryllina 2000ppm
Diethylene Glycol:	No data available
Glycerin:	No data available

SECTION 13: DISPOSAL INFORMATION

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



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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, chronic 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	1-10
(Diethylene glycol mono butyl 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 A (Very 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 = 0