Clover Technologies Group
4200 Columbus Street
Ottawa, IL 61350
Emergency Telephone: 815-431-8100

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Information

Trade Name:	**CLT-14**
Product Class:	**Black Toner**
Chemical Formula:	**Mixture**
Company identification:	**Clover Technologies Group** 4200 Columbus Street Ottawa, IL 61350
Telephone number:	815-431-8100 for information
Issued:	April 4, 2012

Section 2: Composition / Information on Ingredients

Ingredients	**Percent (Wt)**	**CAS No.**
Styrene acrylic resin	30~45	25036-16-2
Magnetite	45~55	1309-38-2
Polyolefin	1~5	9003-07-0
Metal complex	1~5	104815-18-1
Silica	1~2	67762-90-7

Section 3: Hazards Identification

Emergency Overview: Product is stable, nonflammable powder. If used as intended, the product does not present an acute or chronic health hazard.

Physical Hazards: This product is not classified as flammable or combustible. It will burn in case of fire. Avoid contact with strong oxidizers such as chromate, bromate and nitrates.

Routes of Exposure: Inhalation, dermal contact, incidental ingestion.

Inhalation: Excessive inhalation may cause irritation of the nose, throat and respiratory tract.
Eye Contact: Not an irritant.
Dermal Contact: Not an irritant, not a sensitizer.
Ingestion: None currently known.

Chronic effects: None currently known.

Reproductive/Developmental: None identified.

Target Organs: Prolonged breathing of high concentrations may cause adverse effects on the respiratory system.

Signs and Symptoms of Exposure: Prolonged exposure to dusts of this product may irritate the respiratory system.

Medical Conditions Aggravated by Exposure to this Product:

Respiratory disorders, such as asthma, may be aggravated by prolonged exposure to high concentrations of this product.

Section 4: First Aid Measures

Inhalation:
Remove to fresh air immediately. Get medical attention if needed.
Eye Contact:
In case of contact, immediately flush eyes with water for 15 minutes. Get medical attention if needed.
Skin Contact: Wash with soap and water. If irritation occurs or is persistent, seek medical attention
Ingestion: Dilute stomach contents with several glasses of water. Get medical attention.

Section 5: Fire Fighting Measures

Suitable extinguishing media:	CO_2, dry chemical, foam or water.
Extinguishing media which may not be used for safety reasons:	None
Ignition temperature:	No data available
Special protective equipment for fire fighters:	None
Unusual fire & explosion hazards:	Toner material, like most organic material in powder form, is capable of creating a dust explosion

Section 6: Accidental Release Measures

Spill / leak Procedures: Wear personal protective equipment as described in Section 8. Avoid breathing dust. Minimize the release of particles. Vacuum or sweep the material into a bag or other Sealed container. If a vacuum is used, the motor must be rated as dust tight. Dispose Of waste toner in accordance with local requirements.
Miscellaneous: Keep product out of sewers and watercourses.
Personal protection: Avoid inhalation of dust.

Section 7: Handling and Storage

Special Handling: Cleanse skin after contact before breaks or meals, and end of workday.
Special Storage: Avoid direct sunlight. Keep out of reach of children. Store in a cool, dry place.

Section 8: Exposure Control and Personal Protection Information:

Respiratory Protection:	None required under normal use.
Hand Protection:	None required under normal use.
Eye Protection:	None required under normal use.
Skin Protection:	None required under normal use.

Section 9: Physical and Chemical Properties

CHARACTERISTICS:

Appearance:	Fine black power	Melting point:	100~150°C (Softening point)
Form:	Powder	Vapor pressure:	n/a
Odor:	Slight plastic odor	Vapor density:	n/a
Solubility in Water:	Negligible	Evaporation rate:	n/a
Specific gravity:	1.0 ~ 1.5	Boiling point:	n/a

Section 10: Stability and Reactivity

Conditions to avoid:	None
Materials to avoid:	None

Stability: Stable
Hazardous decomposition products: CO and CO_2 and other decomposition products when burned.

Section 11: Toxicological Information:

Acute Toxicity:

Inhalation: LC_{50}: inh-rat>5mg/L/4 hrs. (data from similar toner), not harmful.
Eye Contact: Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC (data from ingredients of toner).
Skin Contact: Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC.
Chronic Toxicity: No data available.
Sensitization: Not classified as a sensitizer according to EU Directive 67/548/EEC and strong sensitizer list of OSHA HCS (US).
Mutagenicity: Negative, does not indicate mutagenic potential, (Ames Test: Salmonella typhimurium)
Carcinogenicity: Not a known or suspected carcinogen according to any IARC Monograph, NTP, OSHA Regulations (USA), EU Directive, or Proposition 65 (California).
Reproductive Toxicity: Not classified as toxic according to EU Directive 67/548/EEC, California Prop. 65, or DFG (Germany).

Section 12: Environmental / Ecological Information

None

Section 13: Disposal Consideration

Used Toner should be disposed of under conditions that meet all federal, state and local environmental regulations.

Section 14: Transportation Information

None. This is not a hazardous product.

Section 15: Regulatory Information

Chemicals Required to Report Under Sara Title III Section 313 (USA):	None
Chemicals Required to Report Under California Proposition 65 (USA):	None
Label Information According to the Directives 88/379/EEC and 67/548/EEC (EU):	
Symbol and Indications:	Not required.
Dangerous Components (CAS No.) wt%:	None
Other:	None
Special provisions in relation to protection of man or the environment:	
(EEC) 2455/92:	Not regulated.
76/769/EEC:	Not regulated.
(EC)3093/94:	Not regulated.
Other:	None

Section 16: Miscellaneous Information

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products as described or their suitability for a particular application.
For general information, contact LG Chemical Ltd. at +82-63-830-4161