

Product name: HP4525KHEMK10KG Toner
MSDS number: US5401 [Date issued 7/4/2011]
Revision: 0 [Date prepared 10/25/13]

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Identification of the mixture

HP4525KHEMK10KG Toner

1.2 Use of the mixture

This mixture is a black toner used in copiers/printers.

1.3 Company information

Manufacturer

Name: Clover Technologies Group
Address: 4200 Columbus Street,
Ottawa, IL 61350
Phone: 815-431-8100

Worldwide

Chemtrec 815-431-8100

2. HAZARDS IDENTIFICATION

Emergency overview

This mixture is fine black powder with no or slight plastic-like odor.

This mixture may cause irritation of the respiratory system, eyes, and skin.

This mixture, like most organic powders, can cause a dust explosion if particles form thick clouds.

Acute health effects

Eye contact: Irritation may occur by mechanical abrasion.

Skin contact: Minimal skin irritation may occur.

Inhalation: Slight irritation of respiratory tract may occur with exposure to large amount of toner dust.

Ingestion: Ingestion is an unlikely route of entry under normal conditions of use.

Carcinogenicity

This mixture contains carbon black and titanium dioxide that are listed by IARC as Group 2B (possibly carcinogenic to humans); however, no significant exposure to either carbon black or titanium dioxide is thought to occur during the use of the product because they are mostly in a bound form in this mixture.

Other information

This mixture is not classified as hazardous according to the latest adaptations of EU Directive 1999/45/EC.

This mixture complies with the requirements of the RoHS Directive 2002/95/EC and its amendment directives.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS Number	% in mixture	TSCA listed/exempted
Styrene acrylate copolymer	Trade secret	70-90	Yes
Wax	Trade secret	5-15	Yes
Carbon black	1333-86-4	3-10	Yes
Amorphous silica	Trade secret	<5	Yes
Titanium dioxide	13463-67-7	0.1-0.9	Yes

Refer to Section 8 for the exposure limits and Section 11 for toxicological information.

Product name: HP4525KHEMK10KG Toner
MSDS number: US5401 [Date issued 7/4/2011]
Revision: 0 [Date prepared 10/25/13]

4. FIRST AID MEASURES

Immediate medical attention may be required in the unlikely event of extreme inhalation, eye contact or unusual reaction due to physical idiosyncrasy of the person.

Eye Contact:

Do not rub eyes. Immediately rinse with plenty of clean running water until particles are washed out. If irritation persists, seek medical advice.

Skin Contact:

Wash out particles with plenty of water and soap. If irritation develops, seek medical advice.

Inhalation:

Provide fresh air immediately. If symptoms occur, seek medical advice.

Ingestion:

Clean mouth out with water. Drink several glasses of water.
If sickness develops, seek medical advice.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide, Water, foam, dry chemical

Extinguishing media which shall not be used: None known.

Special exposure hazards arising from the mixture itself, combustion products, or resulting gases:

Toner, like most organic powders, is capable of creating a dust explosion when particles are dispersed.
Carbon monoxide and carbon dioxide are hazardous resulting gases.

Special protective equipment for fire-fighters: None known.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Avoid dust formation. Do not breathe dust.
Wear personal protective equipment as described in Section 8.

Environmental precautions:

Do not discharge into drains.

Methods for cleaning up:

Eliminate sources of ignition and flammables. Vacuum or sweep the material into a sealed container. If a vacuum cleaner is used, it must be dust explosion-proof. Dispose of the material in accordance with Federal/state/local requirements.

7. HANDLING AND STORAGE

7.1 Handling

Keep out of reach of children.
Avoid dust formation. Handle in adequately ventilated area.
Do not breathe dust. Do not get in eyes or on skin.
Keep away from excessive heat and sources of ignition such as sparks and open flames.
Ensure all the equipment is electrically earthed/grounded before beginning operation.

7.2 Storage

Keep out of the reach of children.
Keep container closed and store at room temperature.
Keep away from excessive heat and sources of ignition.
Do not store with strong oxidizers.

Product name: HP4525KHEMK10KG Toner
MSDS number: US5401 [Date issued 7/4/2011]
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limit values:

Mixture as particulate not otherwise classified

OSHA PELs (TWA): 15 mg/m³ (Total dust), 5 mg/m³ (Respirable fraction)

ACGIH TLV (TWA) : 10 mg/m³ (Inhalable particulate), 3 mg/m³ (Respirable particulate)

Carbon black

OSHA PELs (TWA): 3.5 mg/m³

ACGIH TLV (TWA) : 3.5 mg/m³

Amorphous silica

OSHA PELs (TWA): 20 mppcf* or 80/% SiO₂ mg/m³ (* million particles per cubic foot)

Titanium dioxide

OSHA PELs (TWA): 15 mg/m³ (Total dust), 5 mg/m³ (Respirable fraction)

8.2 Exposure controls

8.2.1 Occupational exposure controls

Good general ventilation should be sufficient under normal conditions of use.

Gloves are recommended.

Protective goggles or safety glasses are recommended.

Personal respiratory mask is not required under normal conditions of use, but a respirator is needed in case of dust formation.

8.2.2 Environmental exposure controls

Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Appearance:	Fine black powder
Odor:	None or slight plastic-like odor

9.2 Important health, safety and environmental information

pH:	Not applicable.
Boiling point/boiling range:	Not applicable.
Flash point:	Not applicable.
Flammability:	Not flammable.
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Vapor pressure:	Not applicable.
Specific gravity:	1.0-1.5 (water = 1)
Solubility:	Partially soluble in toluene and tetrahydrofuran.
Water solubility:	Negligible.
Partition coefficient (n-octanol/water):	Not applicable.
Viscosity:	Not applicable.
Vapor density:	Not applicable.
Evaporation rate:	Not applicable.

9.3 Other information

None

10. STABILITY AND REACTIVITY

This material is stable under normal conditions of use and storage.

No hazardous polymerization will occur.

No significant reaction will occur with air or water at room temperature.

Product name: HP4525KHEMK10KG Toner
MSDS number: US5401 [Date issued 7/4/2011]
Revision: 0 [Date prepared 10/25/13]

10.1 Condition to avoid

Excessive heat
Dust formation

10.2 Materials to avoid

Strong oxidizers, which could vigorously oxidize organic materials in this mixture and cause a fire in an extreme case.

10.3 Hazardous decomposition products

Carbon monoxide and carbon dioxide when combusted.

11. TOXICOLOGICAL INFORMATION

According to our test results of this or similar mixture and the information provided by the suppliers about the substances contained in this mixture, seriously damaging effect is not expected when this mixture is treated in accordance with standard industrial practices and Federal/state/local requirements. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

Acute toxicity

Oral: LD50 rat > 5,000 mg/kg (OECD 425), not harmful. (a similar product)

Inhalation: LC50 rat > 5.36 mg/L (OECD 403) (a similar product)

Dermal: This mixture is classified as a nonirritant to the dermal tissue of rabbit. (a similar product)

Eye irritation: This mixture is classified as a nonirritant to the ocular tissue of rabbit. (a similar product)

Skin irritation: This mixture is classified as a nonirritant to the dermal tissue of rabbit. (a similar product)

Sensitization: Skin sensitizing potential negative (guinea pigs, Magnusson & Kligman's criteria)
(a similar product)

Chronic Toxicity

No test data available.

None of the substances in this preparation is classified for chronic toxicity according to EU Directive 67/548/EEC.

Mutagenicity: Ames test (Salmonella typhimurium, Escherichia coli) negative.

Carcinogenicity:

No test data available. None of the substances in this mixture is classified for carcinogenicity according to EU Directive 67/548/EEC.

Carbon black is listed by IARC as a group 2B (possibly carcinogenic to humans), but IARC monographs vol. 65 and 93 state that there is inadequate evidence in humans for carcinogenicity of carbon black. Inhalation test of a toner for two years* showed no significant carcinogenicity. In addition IARC monograph vol. 93 states that no significant exposure to carbon black is thought to occur during the use of products in which carbon black is bound to other materials, such as rubber, printing ink or paint. Carbon black in this mixture is in a bound form.

* "Negative Effect of Long-term Inhalation of Toner on Formation of 8-Hydroxydeoxyguanosine in DNA in the Lungs of Rats in Vivo", Yasuo Morimoto, et. Al., Inhalation Toxicology, Vol. 17 (13) 749-753 (2005)

Titanium dioxide is listed by IARC as Group 2B (possibly carcinogenic to humans); however, IARC monograph vol. 93 states that exposure levels are assumed to be lower in the user industries, with the possible exception of workers who handle large quantities of titanium

Product name: HP4525KHEMK10KG Toner
MSDS number: US5401 [Date issued 7/4/2011]
Revision: 0 [Date prepared 10/25/13]

dioxide. Titanium oxide in this mixture is within small quantity and mostly in a bound form. Therefore, no significant exposure to titanium dioxide is thought to occur during the use of the product.

Reproductive toxicity:

No test data available.

None of the substances in this mixture is classified for reproductive toxicity according to EU Directive 67/548/EEC.

12. ECOLOGICAL INFORMATION

According to the information provided by the suppliers about the substances contained in this mixture, this mixture is not expected to be harmful to ecology.

12.1 Ecotoxicity

No data available.

12.2 Mobility

No data available.

12.3 Persistence and degradability

No data available.

12.4 Bioaccumulative potential

No data available.

12.5 Results of PBT assessment

Not applicable.

12.6 Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

This mixture may be landfilled or incinerated in compliance with all Federal/state/local provisions.

Do not dump this product into sewers, on the ground, or into any body of water.

14. TRANSPORT INFORMATION

International Transport Information

Not a regulated material under the United State DOT, IMDG, ADR, RID, or ICAO/IATA.

15. REGULATORY INFORMATION

TSCA: All the substances in this mixture are listed or exempted in accordance with TSCA.

CERCLA Reportable Quantity (40 CFR 117, 302): Not applicable to this mixture.

SARA Title III (EPCRA)

Section 302 (40 CFR 355):

Not applicable to this mixture.

Section 311/312 (40 CFR 370):

Carbon black

Immediate health hazard: No

Chronic health hazard: Yes

Sudden release of pressure hazard: No

Reactive hazard: No

Section 313 (40 CFR 372):

Not applicable to this mixture.

This mixture complies with the requirements of the RoHS Directive 2002/95/EC and its amendment directives. Please refer to any other Federal/state/local measures that may be relevant.

Product name: HP4525KHEMK10KG Toner
 MSDS number: US5401 [Date issued 7/4/2011]
 Revision: 0 [Date prepared 10/25/13]

16. OTHER INFORMATION

OSHA Hazard Communication Standard 29 CFR 1910.1210, EU Directives 1999/45/EC and 67/548/EEC mean their latest adaptations in this safety data sheet.

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Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route (The European agreement on cross-border transportation of dangerous goods by road)
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
DOT	Department Of Transportation
EINECS	European Inventory of Existing Commercial Substances
ELINCS	European List of Notified Chemical Substances
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-know Act
EU	European Union
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Medical Guide for Ships
LD50	Lethal Dose, 50 % kill
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PELs	Permissible Exposure Limits
RID	Règlement International concernant le transport des marchandises Dangereuses par chemin de fer (the international regulations covering transportation of dangerous goods by rail)
SARA	Superfund Amendments and Reauthorization Act of 1986
TSCA	Toxic Substances Control Act
TLV	Threshold Limit Value
TWA	Time Weighted Average