



# SAFETY DATA SHEET

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## 1. Chemical and company identification

**Important information** \*\*\* This Safety Data Sheet is only authorised for use by HP for HP Original products. Any unauthorised use of this Safety Data Sheet is strictly prohibited and may result in legal action being taken by HP. \*\*\*

**Name of chemical (Product name)** ML-D3477Series

### Recommended use of the chemical and restrictions on use

**Restrictions on use** Do not use with non compatible printer.

HP Japan Inc.  
5F Ojima2-2-1 Koto-ku  
Tokyo, Japan 136-8711

**Poison Information Centre Telephone** 0120-50-3024  
(+81) 3 5628-1101

### HP Inc. health effects line

**(Toll-free within the US)** 1-800-457-4209  
**(Direct)** 1-760-710-0048

### HP Inc. Customer Care Line

**(Toll-free within the US)** 1-800-474-6836  
**(Direct)** 1-208-323-2551

**Email:** hpcustomer.inquiries@hp.com

### Recommended use of the chemical and restrictions on use

**Intended use** This product is a toner mixture that is used in printing systems.

## 2. Hazards identification

### GHS classification

The product is not classified according to GHS.

### GHS label elements

**Symbols** None.  
**Signal words** None.  
**Hazard statement** None.

### Precautionary statement

**Prevention** None.  
**Response** None.  
**Storage** None.  
**Disposal** None.

### Other hazards which do not result in classification

Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

**GHS Supplemental information** None.

## 3. Composition/information on ingredients

**Substance or mixture** Mixture

### Gazette notification

Components	CAS Number	ENCS no.	ISHL no.	Concentration (%)
Carbon black	1333-86-4	5-3328; 5-5222	(5)-5222	<5

**Chemical formula** UVCB (1333-86-4), UVCB (1333-86-4)

## 4. First aid measures

**If inhaled** Move person to fresh air immediately. If irritation persists, consult a physician.

<b>If on skin</b>	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
<b>If in eyes</b>	Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.
<b>If swallowed</b>	Rinse mouth with water. Drink one to two glasses of water. DO NOT induce vomiting. Get medical attention immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Difficulty in breathing. Coughing.
<b>Protection of first-aid responders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Notes to physician</b>	Treat symptomatically.

## 5. Fire-fighting measures

<b>Extinguishing media</b>	Dry chemical, foam, carbon dioxide, water fog.
<b>Extinguishing media to avoid</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards</b>	During fire, gases hazardous to health may be formed.
<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk.
<b>Protection of fire-fighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency measures</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. See Section 8 of the SDS for Personal Protective Equipment.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Methods or materials for containment and cleaning up</b>	Avoid the generation of dusts during clean-up. Use explosion proof electric equipment. Collect dust using a vacuum cleaner equipped with HEPA filter. The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Sweep up or vacuum up spillage and collect in suitable container for disposal.

## 7. Handling and storage

<b>Handling</b>	
<b>Technical measures (e.g. Local and general ventilation)</b>	Not available.
<b>Safe handling advice</b>	Not available.
<b>Hygiene measures</b>	Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product.
<b>Storage</b>	
<b>Safe storage conditions</b>	Store in tightly closed original container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
<b>Safe packaging materials</b>	Not available.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### Japan. OELs - JSOH (Japan Society of Occupational Health: Recommendation of Occupational Exposure Limits)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	4 mg/m <sup>3</sup>	Total dust.
		1 mg/m <sup>3</sup>	Respirable dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m <sup>3</sup>	Inhalable fraction.

<b>Engineering measures</b>	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.
<b>Personal protective equipment</b>	
<b>Respiratory protection</b>	No personal respiratory protective equipment required under normal conditions of use.
<b>Hand protection</b>	Rubber gloves are recommended. Wash hands after handling.
<b>Eye protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	Protection suit must be worn.

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## 9. Physical and chemical properties

<b>Appearance</b>	
<b>Physical state</b>	Not available.
<b>Form</b>	Solid. Fine powder
<b>Color</b>	Black.
<b>Odor</b>	Odorless
<b>pH</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble in water.
<b>Solubility (other)</b>	Partially soluble in toluene, chloroform and tetrahydrofuran
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	> 392 °F (> 200 °C)
<b>Viscosity (Coefficient of viscosity)</b>	Not available.
<b>Other information</b>	
<b>Oxidizing properties</b>	No information available.

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## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under normal storage conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
<b>Incompatible materials</b>	This product may react with strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon monoxide and carbon dioxide.

## 11. Toxicological information

**Acute toxicity** Based on available data, the classification criteria are not met.  
LD50/oral/rat >5000 mg/kg.

Components	Species	Test Results
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Carbon black (CAS 1333-86-4)

**Acute**

**Oral**

LD50

Rat

> 10000 mg/kg

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.  
Not a known irritant. (OECD 404).

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.  
Not a known irritant. (OECD 405).

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.  
Negative Ames Test (Test strains: Salmonella typhimurium).

**Carcinogenicity** Based on available data, the classification criteria are not met.

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

**ACGIH Carcinogens**

Carbon black (CAS 1333-86-4)

A3 Confirmed animal carcinogen with unknown relevance to humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Carbon black (CAS 1333-86-4)

2B Possibly carcinogenic to humans.

**Japan Society for Occupational Health: Carcinogen**

CARBON BLACK, RESPIRABLE DUST (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**Other information** Complete toxicity data are not available for this specific formulation  
Refer to Section 2 for potential health effects and Section 4 for first aid measures.

In a study in rats (H.Muhle) by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of the rats in the concentration(16mg/m3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m3) exposure group. But no pulmonary changes was reported in the lowest (1mg/m3) exposure group, the most relevant level to potential human exposures.

In 1996, the IARC reevaluated carbon black as a GROUP 2B carcinogen (possible human carcinogen). This evaluation is given to carbon black for which there is inadequate human evidence, but sufficient animal evidence. The latter is based upon the developer of lung tumors in rat receiving chronic inhalation exposures to free carbon black at level that induce particle overload of the lung. Studies performed in animal models other than rats have not demonstrated an association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.

**Bioaccumulation** Not available.

**Mobility in soil** Not available.

Hazardous to the ozone layer Not available.

### 13. Disposal considerations

**Local disposal regulations** Dispose of in compliance with federal, state, and local regulations. Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Do not put toner container into fire; heated toner may cause severe burns. Do not incinerate. Do not allow this material to drain into sewers/water supplies.

HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit <http://www.hp.com/recycle>.

### 14. Transport information

**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**ADR**

Not regulated as dangerous goods.

**Further information** Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

### 15. Regulatory information

**Industrial Safety and Health Act**

**Notifiable substances**

CARBON BLACK Table 9 Ordinance No. 130 0 - 5.0 %

**Labeling substances**

CARBONBLACK 0 - 5.0 %

**Poisonous and Deleterious Substances Control Act**

**Specified poisonous substances**

Not regulated.

**Poisonous substances**

Not regulated.

**Deleterious substances**

Not regulated.

**Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.**

**Class I specified chemical substances**

Not regulated.

**Class II specified chemical substances**

Not regulated.

**Monitoring chemical substances**

Not regulated.

**Priority Assessment Chemical Substances (PACs)**

Not regulated.

**Reporting Exempted Substances**

Not regulated.

**Law concerning Pollutant Release and Transfer Register**

**Specified class 1 substances (substance name, ordinance number and content)**

Not regulated.

**Class 1 substances (substance name, ordinance number and content)**

Not regulated.

**Class 2 substances (substance name, ordinance number and content)**

Not regulated.

**Fire Service Act**

Not dangerous goods under Fire Service Law

**Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule**

Not regulated.

**Air Law, Enforcement Rule**

Not regulated.

**Explosives Control Act**

Not regulated.

**Regulatory information**

All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

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## 16. Other information

This Safety Data Sheet document is provided without charge to customers of HP. Data is the most current known to HP at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

This safety data sheet is meant to convey information about HP inks (toners) provided in HP Original ink (toner) supplies. If our Safety Data Sheet has been provided to you with a refilled, remanufactured, compatible or other non-HP Original supply please be aware that the information contained herein was not meant to convey information about such products and there could be considerable differences from information in this document and the safety information for the product you purchased. Please contact the seller of the refilled, remanufactured or compatible supplies for applicable information, including information on personal protective equipment, exposure risks and safe handling guidance. HP does not accept refilled, remanufactured or compatible supplies in our recycling programs.

### Revision information

1. Product and Company Identification: Alternate Trade Names  
Chemical and company identification: Important information

### Explanation of abbreviations

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds