



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-D3470Series
	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) (Direct)	1-800-457-4209 1-760-710-0048
HP Inc. Customer Care Line (Toll-free within the US) (Direct)	1-800-474-6836 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.
Supplemental information	None.

3. Composition/information on ingredients

Substance or mixture	Mixture			
		Gazette notification		
Components	CAS Number	ENCS no.	ISHL no.	Concentration (%)
Polyester resin Synonym(s): Polyester resin	Trade Secret			<90%
Black Pigment	Proprietary	Proprietary	Proprietary	<5%
Silica	Trade Secret			<5%
Wax	Trade Secret	(6)-10, (6)-47, (6)-48, (6)-50	(6)-10, (6)-47, (6)-48, (6)-50	<5%

Chemical formula (C3H6.C2H4)x (Trade Secret), (C3H6.C2H4)x (Trade Secret)

4. First aid measures

If inhaled	Move person to fresh air immediately. If irritation persists, consult a physician.
If on skin	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
If in eyes	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.
If swallowed	Rinse mouth with water. Drink one to two glasses of water. DO NOT induce vomiting. Get medical attention immediately.
Most important symptoms/effects, acute and delayed	Difficulty in breathing. Coughing.
Protection of first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Notes to physician	Treat symptomatically.

5. Fire-fighting measures

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

6. Accidental release measures

Personal precautions, protective equipment and emergency measures	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.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Methods or materials for containment and cleaning up	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

Handling	
Technical measures (e.g. Local and general ventilation)	Not available.
Safe handling advice	Not available.
Hygiene measures	Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product.
Storage	
Safe storage conditions	Store in tightly closed original container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
Safe packaging materials	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
Black Pigment	TWA	4 mg/m3	Total dust.
		1 mg/m3	Respirable dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Black Pigment	TWA	3 mg/m3	Inhalable fraction.

Exposure guidelines 5 mg/m3 (Respirable Fraction) 3 mg/m3 (Respirable Particulate)

Engineering measures	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.
Personal protective equipment	
Respiratory protection	No personal respiratory protective equipment required under normal conditions of use.
Hand protection	Rubber gloves are recommended. Wash hands after handling.
Hygiene measures	Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product.
Personal protective equipment	
Eye protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Protection suit must be worn.

9. Physical and chemical properties

Appearance

Physical state	Not available.
Form	Solid. Fine powder
Color	Black.

Odor Odorless

pH Not available.

Melting point/Freezing point Not available.

Boiling point, initial boiling point, and boiling range Not available.

Flash point Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure Not available.

Vapor density Not available.

Specific gravity Not available.

Solubility(ies)

Solubility (water)	Insoluble in water.
Solubility (other)	Partially soluble in toluene, chloroform and tetrahydrofuran

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature > 392 °F (> 200 °C)

Viscosity (Coefficient of viscosity) Not available.

Other information

Oxidizing properties	No information available.
-----------------------------	---------------------------

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Stable under normal storage conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.

Incompatible materials This product may react with strong oxidizing agents.

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
Black Pigment		
<u>Acute</u>		
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

Black Pigment (CAS Proprietary) A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Black Pigment (CAS Proprietary) 2B Possibly carcinogenic to humans.

Japan Society for Occupational Health: Carcinogen

Black Pigment (CAS Proprietary) 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

Not regulated.

Labeling substances

CARBONBLACK

0 - 7.5 %

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.

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.

Explanation of abbreviations

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