



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-D4550Series

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.

Supplemental information None.

3. Composition/information on ingredients

Substance or mixture	CAS Number	Gazette notification		Concentration (%)
		ENCS no.	ISHL no.	
Black Pigment	Proprietary	Proprietary	Proprietary	<5
Amorphous silica Synonym(s): Amorphous silica	7631-86-9	(1)-548	(1)-548	<2.5
Paraffin waxes and Hydrocarbon waxes	8002-74-2	(2)-10, (8)-414	(2)-10, (8)-414	<2.5
Isobutyltrimethoxysilane	18395-30-7	(2)-2052, (2)-2053	(2)-2052, (2)-2053	<1

	CAS Number	Gazette notification		Concentration (%)
		ENCS no.	ISHL no.	
Titanium dioxide	13463-67-7	(1)-558, (5)-5225	(1)-558, (5)-5225, 2-(3)-509	<1

Chemical formula O2Si (7631-86-9), O2Si (7631-86-9), O2-Ti (13463-67-7), O2-Ti (13463-67-7), C7H18O3Si (18395-30-7)

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.

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

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m3	Total dust.
		1 mg/m3	Respirable dust.
		0.3 mg/m3	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Black Pigment	TWA	3 mg/m3	Inhalable fraction.
Paraffin waxes and Hydrocarbon waxes (CAS 8002-74-2)	TWA	2 mg/m3	Fume.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

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.
Hazardous decomposition products	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.
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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.
Titanium dioxide (CAS 13463-67-7)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Amorphous silica (CAS 7631-86-9)	3 Not classifiable as to carcinogenicity to humans.
Black Pigment (CAS Proprietary)	2B Possibly carcinogenic to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

Japan Society for Occupational Health: Carcinogen

Black Pigment (CAS Proprietary)	2B Possibly carcinogenic to humans.
Titanium dioxide (CAS 13463-67-7)	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 %
SOLID PARAFFIN	Table 9 Ordinance No. 170	0 - 2.5 %
TITANIUM DIOXIDE	Table 9 Ordinance No. 191	0 - 1.0 %

Labeling substances

CARBONBLACK	0 - 5.0 %
Silica	0 - 0.10 %

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

SILICON DIOXIDE
TITANIUM DIOXIDE

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.

Act on Prevention of Marine Pollution and Maritime Disaster

PARAFFIN WAX Category: Y
TITANIUMOXIDE Category: Z

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