



SAFETY DATA SHEET

1. Identification of the dangerous substance/preparation and the identity of the manufacturer, importer, agent or marketer

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. ***

Product name ML-D3470Series

Other means of identification Not available.

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2. Identification of the components of the substance/preparation

Substance or Preparation	Preparation		
Chemical name	Synonyms	CAS number	Percent
Polyester resin	Polyester resin	Trade Secret	<90%
Black Pigment		Proprietary	<5%
Silica		Trade Secret	<5%
Wax		Trade Secret	<5%

3. Dangers of the dangerous substance/preparation

Physical hazards Not classified as a physical hazard.

Health hazards Not classified as a health hazard.

Environmental hazards Not classified as an environmental hazard.

GHS classification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

GHS label elements

Symbols None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention None.

Response None.

Storage None.

Disposal None.

Other hazards	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.
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Supplemental information	None.
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4. First aid instructions

First aid measures for different exposure routes

Inhalation	Move person to fresh air immediately. If irritation persists, consult a physician.
Skin contact	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Eye contact	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.
Ingestion	Rinse mouth with water. Drink one to two glasses of water. DO NOT induce vomiting. Get medical attention immediately.

Main symptoms	Difficulty in breathing. Coughing.
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Personal protection for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
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Notes to physician	Treat symptomatically.
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Special first aid equipment	Not available.
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5. Firefighting procedure

Extinguishing media

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

Containment procedures	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.
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Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
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Methods for cleaning up	Not available.
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Other information	Fine powder can form explosive dust-air mixtures. Take up mechanically and collect in suitable container for disposal. Dispose of in compliance with federal, state, and local regulations.
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Personal precautions	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.
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7. Handling and storage

Precautions for safe handling	Minimize dust generation and accumulation. Use local exhaust ventilation. Avoid prolonged exposure. Practice good housekeeping.
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Conditions for safe storage, including any incompatibilities	Store in tightly closed original container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
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8. Means of reducing exposure and personal protection

Engineering measures to reduce exposure

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.

Occupational exposure limits

Israel. OELs (Labor Inspection Regs. (Occup. & Bio. Monitoring of those Working with Hazardous Materials), Appendix 2, 1990, as amended)

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

US. ACGIH Threshold Limit Values

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

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

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

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.

Eye protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Protection suit must be worn.

Hygiene measures

Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product.

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.

Initial boiling point and boiling range

Not available.

Decomposition temperature

> 392 °F (> 200 °C)

Flash point

Not available.

Flammability

Not available.

Auto-ignition temperature

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.

Oxidizing properties

No information available.

Vapor pressure

Not available.

Density

1.20 g/ml

Solubility(ies)

Solubility (water)

Insoluble in water.

Solubility (other)	Partially soluble in toluene, chloroform and tetrahydrofuran
Partition coefficient (n-octanol/water)	Not 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.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Incompatibility	This product may react with strong oxidizing agents.
Hazardous decomposition products	Carbon monoxide and carbon dioxide.
Materials to avoid	Not available.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Expected to be a low ingestion hazard.

Toxicological data Not available.

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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Black Pigment

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

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.

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.
Chronic effects	Not available.
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. Environmental information

Ecotoxicity

Environmental effects Not available.

Persistence and degradability

Biodegradation No data is available on the degradability of any ingredients in the mixture.

Mobility in soil Not available.

Other information Not available.

13. Dangerous substance disposal methods

Disposal instructions 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>.

Waste from residues / unused products Not available.

Contaminated packaging Not available.

Special precautions Not available.

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.

15. Regulatory information

Israel regulations

Israel. Harmful Chemicals (Hazardous Substances Law, 5753-1993, Annex 1, as amended)

Not listed.

Israel. Toxic Chemicals (Hazardous Substances Law, 5753-1993, Annex 2, as amended)

Not listed.

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

Training information	Follow training instructions when handling this material.
Recommended use	Not available.
Recommended restrictions	Do not use with non compatible printer.
Further information	Not available.
Bibliography	Not available.
Disclaimer	<p>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.</p> <p>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.</p>

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