

Version #: 01

Issue date: 04-January-2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture Print Cartridge IM 460(Black toner)

Registration number -

Synonyms None.

SDS No. 842610

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Image formation in printing machines or copiers dry toner

Uses advised against No other uses are advised.

1.3. Details of the supplier of the safety data sheet

Distributor RICOH Schweiz AG

Address Hertistrasse 2 CH - 8304 Wallisellen, Switzerland

Phone 41 844 360 360

E-mail tqm@ricoh.ch

Importer Ricoh Europe SCM B.V.

Address Blankenweg 24, 4612 RC Bergen op Zoom, The Netherlands

E-mail reu.compliance@ricoh-europe.com

Manufacturer Ricoh Co., Ltd.

Address Chome 3-6 Nakamagome, Ôta, Tokyo, 143-8555, Japan

E-mail msdsinfo@nts.ricoh.co.jp

1.4 Urgent call phone number 145

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms None.

Signal word None.

Hazard statements The mixture does not meet the criteria for classification.

Precautionary statements

Prevention Not available.

Response Not available.

Storage Not available.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Polyester Resin	80 - 100	Confidential	Confidential	-	
Classification: -					
Carbon Black	1 - 15	1333-86-4 215-609-9	01-2119384822-32-xxxx	-	
Classification: -					
Wax	1 - 10	Confidential	Confidential	-	
Classification: -					
Silica	0,1 - 1	7631-86-9 231-545-4	01-2119379499-16-xxxx	-	
Classification: -					
Titanium dioxide	<1	13463-67-7 236-675-5	01-2119489379-17-xxxx	022-006-002	
Classification: Carc. 2;H351					

Composition comments This product does not contain any of the following RoHS substances as ingredients. Cadmium, Hexavalent Chromium, Mercury, Lead, Polybrominated biphenyls (PBB), Polybrominated diphenylethers (PBDE), Phthalate esters (DEHP, BBP, DBP, and DIBP), SVHC (substances of very high concern: published by ECHA).

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation Move to fresh air. Get medical attention, if needed.
Skin contact Wash off with soap and plenty of water.
Eye contact Rinse with plenty of water. If eye irritation persists: Get medical advice/attention.
Ingestion Gargle with plenty of water and move to a fresh air location. Please see a doctor if necessary.

4.2. Most important symptoms and effects, both acute and delayed Not available.

4.3. Indication of any immediate medical attention and special treatment needed Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards Not available.

5.1. Extinguishing media

Suitable extinguishing media Water. Foam. Dry chemicals. Carbon dioxide (CO2).
Unsuitable extinguishing media Not available.

5.2. Special hazards arising from the substance or mixture Like ordinary organic fine powder, it can burn explosively if scattered in the air.

5.3. Advice for firefighters

Special protective equipment for firefighters If necessary, wear appropriate protective equipment (gloves, glasses, mask, etc.). If you are burning a lot, you need normal fire protection equipment.
Special fire fighting procedures No special fire extinguishing method is required. Generally, extinguish the fire with water or a fire extinguishing agent.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Not available.
For emergency responders Not available.

6.2. Environmental precautions Do not discharge into drains, water courses or onto the ground. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up Fine particles can form an explosive mixture with air, so make sure there is no fire around you. If there is a fire, remove it and then wipe it off with a cloth moistened with water to prevent the toner from scattering as much as possible. If it is unavoidable to use a vacuum cleaner, be sure to use a vacuum cleaner with dust-proof and explosion-proof safety measures.

6.4. Reference to other sections Not available.

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.
- 7.2. Conditions for safe storage, including any incompatibilities Keep out of reach of children. Keep at a temperature not exceeding 35 °C in quality. Avoid direct sunlight in quality.
- 7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Switzerland. SUVA Grenzwerte am Arbeitsplatz Components Type

Components	Type	Value	Form
Carbon Black (CAS 1333-86-4)	TWA	3 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.
Silica (CAS 7631-86-9)	TWA	4 mg/m3	
Titanium dioxide (CAS 13463-67-7)	TWA	3 mg/m3	Respirable dust.

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

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Proper ventilation should be provided. However, it is not necessary for the intended purpose.

Individual protection measures, such as personal protective equipment

General information No special protective equipment required.

Eye/face protection Not normally needed.If necessary, Wear eye/face protection.

Skin protection

- Hand protection Not normally needed.If necessary, Wear suitable gloves.

- Other Not normally needed.If necessary, Wear suitable coveralls to prevent exposure to the skin.

Respiratory protection Not required under normal usage conditions. However, if the specified exposure limit concentration is exceeded, use a licensed dustproof breathing device.

Thermal hazards Not applicable.

Hygiene measures Wash hands after handling.

Environmental exposure controls Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Form	Powder.
Colour	Black.
Odour	Slightly plastic odour
Odour threshold	Not available
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	Not applicable
Flammability	Not available.
Flash point	Not applicable
Auto-ignition temperature	Not available.
Decomposition temperature	Not available

pH	Not applicable
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water) (log value)	Not available
Vapour pressure	Not applicable
Density and/or relative density	
Density	1,20 g/cm ³
Vapour density	Not applicable
Particle characteristics	Not available.
9.2. Other information	
9.2.1. Information with regard to physical hazard classes	No relevant additional information available.
9.2.2. Other safety characteristics	Dust explosion (like most finely grained organic powders)
Evaporation rate	Not applicable
Flammability (temperature)	Not flammable
Softening point	100 °C (212 °F)
Viscosity	Not applicable
VOC	<=0,2 %

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Dust explosive, but under the intended conditions of use, the probability of dust explosion is very low.
10.4. Conditions to avoid	None under normal conditions.
10.5. Incompatible materials	None under normal conditions.
10.6. Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

General information	Not available.
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Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms	Not available.
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11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product	Species	Test Results
Print Cartridge IM 460(Black toner)		
<u>Acute</u>		
Oral		
LD50	Rat	>= 5000 mg/kg

Skin corrosion/irritation

Irritation Corrosion - Skin: P.I.I. value

Print Cartridge IM 460(Black toner)	<= 1 Species: Rabbit Notes: Based on other product test results of similar ingredients.
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Serious eye damage/eye irritation	Not available.
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Respiratory sensitisation	Not available.
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Skin sensitisation

Skin Sensitisation
Print Cartridge IM 460(Black toner)

0 %
Species: Marmott
Notes: Based on other product test results of similar ingredients.

Germ cell mutagenicity

Germ cell mutagenicity: Ames test
Print Cartridge IM 460(Black toner)

Result: Negative
Notes: Ames test

Carcinogenicity

Carbon black contained in this product is classified to Group 2B of IARC as the result of inhalation test in use of rat.
This is due to the fact that rat alone showed lung tumor in the animal experiment under very high concentration.
During a normal use of this product, design of the cartridge proves it impossible to have powder carbon black released to the air.
Intake from the mouth and skin does not show carcinogenicity.
Titanium dioxide contained in this product falls under IARC rank 2B of carcinogens. This classification is based on the results of an inhalation test on rats, but no carcinogenicity was observed in dermal and oral ingestion tests on rats. Also, there is no possibility of inhaling Titanium dioxide from this product. Therefore, this product powdered Titanium dioxide is not released into the air. No carcinogenicity has been observed when ingested through the mouth or skin.

IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium dioxide (CAS 13463-67-7)

2B Possibly carcinogenic to humans.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

Mixture versus substance information Not available.

11.2. Information on other hazards

Endocrine disrupting properties Not available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity This material is not expected to be harmful to aquatic life.

12.2. Persistence and degradability Not available.

12.3. Bioaccumulative potential Not available.

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

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Endocrine disrupting properties Not available.

12.7. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Not available.

Contaminated packaging Not available.

EU waste code Not available.

Disposal methods/information Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Do not throw in contents or fire containing contents.
The contents will splash and cause burns.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Maritime transport in bulk according to IMO instruments Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Titanium dioxide (CAS 13463-67-7)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

National regulations

Not available.

Switzerland. Schedules 1A-3B on Substances Subject to ChKV, Regulation on the Control of Chemicals with Civilian and Military Use (ChKV)

Not listed.

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

List of abbreviations

Not available.

References	ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices HSDB® - Hazardous Substances Data Bank Japan Chemical Industry Association (JCIA) GHS Guideline, June 2019 Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits JIS Z 7252:2019 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" JIS Z 7253:2019 Hazard communication of chemicals based on GHS - Labelling and Safety Data Sheet (SDS) National Toxicology Program (NTP) Report on Carcinogens US. IARC Monographs on Occupational Exposures to Chemical Agents <ul style="list-style-type: none"> • Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats H.Muhle et.al Fundamental and Applied Toxicology 17.280-299(1991) • Lung Clearance and Retention of Toner, Utilizing a Tracer Technique, during Chronic Inhalation Exposure in Rats B.Bellmann Fundamental and Applied Toxicology 17.300-313(1991) International Agency for Research on Cancer IARC: International Agency for Research on Cancer Carcinogenicity classification Group 1: Carcinogenic to humans Group 2A: Probably carcinogenic to humans Group 2B: May be carcinogenic to humans Group 3: Cannot be classified as carcinogenic to humans Group 4: Probably not carcinogenic to humans
Information on evaluation method leading to the classification of mixture	Not available.
Full text of any statements, which are not written out in full under sections 2 to 15	H351 Suspected of causing cancer by inhalation. H351 Suspected of causing cancer.
Revision information	Product and Company Identification: Alternate Trade Names Composition / Information on Ingredients: Ingredients SECTION 3: Composition/information on ingredients: Composition comments SECTION 11: Toxicological information: Carcinogenicity Regulatory Information: Regulatory Information HazReg Data: International Inventories
Training information	Not available.
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.