KYOCERA Document Solutions

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name	**Black Toner For ECOSYS M3550idn, FS-4200DN**
Manufacturer	KYOCERA Document Solutions Inc.
Address	KYOCERA Document Solutions Canada, Ltd. 6120 Kestrel Road Mississauga, ON. L5T 1S8.
Telephone Number	(905) 670-4425
Date	January , 2019

Section 2. Composition/Information on Ingredients

Hazardous Components (Chemical Identity, Common Name/s)		*OSHA PEL* SubpartZ	*ACGIH TLV*	*IARC*	*NTP*	*Weight%*
(CAS No. 7631-86-9)	Amorphous Silica	80mg/m^3/%SiO_2(TWA)	Not Listed	Group3	Not Listed	<2
(CAS No. 13463-67-7)	Titanium dioxide	15mg/m^3(Total dust)(TWA)	10mg/m^3(TWA)	Group2B	Not Listed	<1
(Non Hazardous Ingredients)						
Polyester resin						40-50
Magnetite						35-45
Wax						1-5

Section 3. Hazards Identification

Most Important Hazards: None

Specific Hazards: None

Other Information on Hazards: Potential Health Effects

Ingestion	Ingestion is not applicable route of entry for intended use.
Inhalation	Prolonged inhalation of excessive dusts may cause lung damage. Use of this product, as intended, does not result in inhalation of excessive dusts.
Eye Contact	May cause transient eye irritation.
Skin Contact	Unlikely to cause skin irritation.

Section 4. First Aid Measures

Inhalation	Remove from exposure to fresh air. Gargle with plenty of water. Seek medical treatment if effects (such as coughing) occur.
Skin Contact	Wash with soap and water.
Eye Contact	Flush thoroughly with water and seek medical treatment if irritating.
Ingestion	Rinse out the mouth. Dilute stomach contents with several glasses of water and seek medical treatment if necessary.

Section 5. Fire Fighting Measures

Extinguishing Media	Water, (Sprinkle with water), Foam, Powder, CO_2 or Dry Chemical Extinguisher.
Fire Fighting Procedure	Pay attention not to blow away toner powder. Drain water off around and decrease the atmosphere temperature to extinguish the fire.

Section 6. Accidental Release Measures

Personal Precautions	Avoid inhalation, ingestion, eye and skin contact in case of accidental toner release.
Environmental Precautions	Do not release into drains and surface water.
Method for Cleaning Up	Gather the released toner, do not blow away and wipe up with a wet cloth.

Section 7. Handling and Storage

Handling	Keep the toner container tightly closed.
Storage	Keep the toner container tightly closed and store in a cool, dry and dark place. Keep away from fire. Keep away from children.

Section 8. Exposure Controls/Personal Protection

Control Parameters<Reference Data>	
ACGIH $TLV_{(2)}$-TWA	Inhalable fraction 10mg/m^3, Respirable fraction 3mg/m^3
OSHA $PEL_{(3)}$-TWA	Total dust 15mg/m^3, Respirable fraction 5mg/m^3
Protective Equipment	
Respiratory Protection	None required under normal use.
Eye/Face Protection	None required under normal use.
Skin/Hand/Body Protection	None required under normal use.
Ventilation	Ventilator not required under normal use.

Section 9. Physical and Chemical Properties

Appearance	
Physical state	Solid
Form	Fine powder
Color	Black
Odor	Odorless
pH	Not applicable
Melting Point	125^0 C
Explosion Properties	Dust explosion is improbable under normal use. Experimental explosiveness of toner is classified into the same rank such kind of powder as flour, dry milk and resin powder according to pressure rising speed.
Density	1.5-2.0 g/cm^3
Solubility	Almost insoluble in water.

Section 10. Stability and Reactivity

Stability / Reactivity	Stable under normal use.
Hazardous Decomposition Products	None

Section 11. Toxicological Information

Acute oral toxicity	(rat)LD_{50}>2,000mg/kg (Estimated from other products containing same materials.)
Acute dermal toxicity	(rat)LD_{50}>2,000mg/kg (Estimated from Acute oral toxicity for same product.)
Acute inhalation toxicity	(rat)LC_{50}(4 hr)>5.0mg/l (Estimated from other products containing same materials.)
Acute eye irritation	(rabbit) Minimal irritant (Estimated from other products containing same materials.)
Acute skin irritation	(rabbit) Non-irritant (Estimated from other products containing same materials.)
Skin sensitization	(mouse)Non-Sensitizer (Estimated from other products containing same materials.)
Mutagenicity	Ames Test is Negative. (Estimated from the data of constituent materials.)
Information of Ingredients	No mutagen, according to MAK, TRGS905 and (EC)No 1272/2008 AnnexVI Table 3.2.
Reproductive Toxicity	
Information of Ingredients	No reproductive toxicant, according to MAK, CA Proposition 65, TRGS 905 and (EC)No 1272/2008 AnnexVI Table3.2.
Carcinogenicity	
Information of Ingredients	No carcinogen or potential carcinogen (except titanium dioxide), according to IARC, Japan Association on Industrial Health, ACGIH, EPA, OSHA, NTP, MAK, CA Proposition 65, TRGS 905 and (EC)No 1272/2008 AnnexVI Table3.2.

The IARC reevaluated titanium dioxide as a Group 2B carcinogen (possibly carcinogenic to humans) as the result of inhalation exposure test in rats. But, oral/skin test does not show carcinogenicity. (4) In the animal chronic inhalation studies for titanium dioxide, the lung tumor was observed in only rats. It is estimated that this is attributed to the overload of rat's lung clearance mechanism (overload phenomenon).(5) The inhalation of excessive titanium dioxide does not occur in normal use of this product. Also, epidemiological studies to date have not revealed any evidence of the relation between occupational exposure to titanium dioxide and respiratory tract diseases.

Chronic effects:

In a study in rats 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 high concentration (16mg/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animal in the middle (4mg/m^3) exposure group.(1) But no pulmonary change was reported in the lowest (1mg/m^3) exposure group, the most relevant level to potential human exposures.

Other Information	None

Section 12. Ecological Information

No data available

Section 13. Disposal Considerations

Do not incinerate toner and toner containers. Dangerous sparks may cause burn. Any disposal practice should be done under conditions which meet local, province and federal laws and regulations relating to waste (contact local or province environmental agency for specific rules).

Section 14. Transport Information

UN No.	None
UN Shipping Name	None
UN Classification	None
UN Packing Group	None
Special Precautions	None

Section 15. Regulatory Information

EU Information

Label information according to the Directives 67/548/EEC and 1999/45/EC.

Symbol and Indication	Not required.
R-Phrase	Not required.
S-Phrase	Not required.
Special Markings	Not required.

Hazardous ingredients for labeling: None

US Information

All components in this product comply with order under TSCA.

Canada Information

This product is not a WHMIS-controlled product, since we consider it as a Manufactured article.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.

<Reference>

(1) 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)
(2) ACGIH TLV (Threshold Limit Values)
(3) OSHA PEL (Permissible Exposure Limits)
(4) IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol.93.
(5) NIOSH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupational Exposure to Titanium Dioxide DRAFT".
*ISO 11014-1 Safety data sheet for chemical products.

<Abbreviation>

ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration
TWA	Time Weighted Average
IARC	International Agency for Research on Cancer
EPA	Environmental Protection Agency (USA)
NTP	National Toxicology Program
MAK	Maximale Arbeitsplatzkonzentrationen under Deutsche Forschungsgemeinschaft
Proposition 65	CA Safe Drinking Water and Toxic Enforcement Act of 1986.
TRGS905	Technische Regeln für Gefahrstoffe (Deutsche)
UN	United Nations
TSCA	Toxic Substances Control Act (USA)
WHMIS	Workplace Hazardous Materials Information System(Canada)

End of MSDS