MSDS No.: TK3134-KDAU-02
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MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Black Toner for FS-4200DN, 4300DN, ECOSYS M3550idn, M3560idn (TK-3134)

Manufacturer

Name : KYOCERA Document Solutions Inc.

Address : 2-28, 1-Chome, Tamatsukuri, Chuo-ku Osaka 540-8585, Japan

Supplier

Name : KYOCERA Document Solutions Australia Pty. Ltd.

Address : Level 3, 6-10 Talavera Road,North Ryde,New South Wales 2113, Australia

Telephone Number : +61-2-9888-9999

Emergency Telephone: 131 126 (24 hours) Poison Information Centre.

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Substance or preparation ; Preparation

Ingredients ;

Chemical Name(Common Name)	CAS No.	Weight %
Polyester resin	Confidential	40-50
Magnetite	Confidential	35-45
Wax	Confidential	1-5
Amorphous silica	7631-86-9	< 2
Titanium dioxide	13463-67-7	< 1

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.

4. FIRST-AID MEASURES

Inhalation : Remove from exposure to fresh air and gargle with plenty of water. Consult a doctor in case of such symptoms as coughing.

Skin Contact : Wash with soap and water.

Eye Contact : Flush with water immediately and see a doctor if irritating.

Ingestion : Rinse out the mouth. Drink one or two glasses of water to dilute. Seek medical treatment if necessary.

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.

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 not to blow away and wipe up with a wet cloth.

7. HANDLING AND STORAGE

Handling : Never open the toner container.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters<Reference Data>:

ACGIH $TLV_{(2)}$-TWA : Inhalable fraction 10mg/m^3, Respirable fraction 3mg/m^3
Titanium dioxide 10mg/m^3

OSHA $PEL_{(3)}$-TWA : Total dust 15mg/m^3, Respirable fraction 5mg/m^3
Amorphous silica 80mg/m^3/%SiO_2
Titanium dioxide 15mg/m^3 (Total dust)

Protective Equipment : Respiratory protection, eye protection, hand protection, skin and body

protection are not required under normal use.

Ventilation : Ventilator is not required under normal use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state: Solid Form: Fine powder Color: Black Odor: Odorless

pH : Not applicable

Melting Point : 125 °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 the pressure rising speed.

Density : 1.5-2.0 g/cm^3

Solubility : Almost insoluble in water

10. STABILITY AND REACTIVITY

Stability/ Reactivity : Stable under normal use.

Hazardous Decomposition Products: None

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}(4hr) >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 sensitisation : (mouse)Non-sensitiser
(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 Table3.2.

Reproductive Toxicity:

Information of Ingredients: No reproductive toxicant, according to MAK, California Proposition 65, TRGS905 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, California 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 dose 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

12. ECOLOGICAL INFORMATION

No data available.

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, state and federal laws and regulations relating to waste (contact local or state environmental agency for specific rules).

14. TRANSPORT INFORMATION

UN No. : None

UN Shipping Name : None

UN Classification : None

UN Packing Group : None

Special Precautions : None

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.

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
2010 TLVs and BEIs (Threshold Limit Values for Chemical Substances and Physica Agents and Biological Exposure Indices)

OSHA：Occupational Safety and Health Administration (29 CFR Part1910 Subpart Z)

TWA：Time Weighted Average

IARC：International Agency for Research on Cancer
（IARC Monographs on the Evaluations of Carcinogenic Risks to Humans）

EPA: Environmental Protection Agency (Integrated Risk Information System) (USA)

NTP: National Toxicology Program (Report on Carcinogens) (USA)

MAK: Maximale Arbeitsplatz-Konzentrationen (List of MAK and BAT Values 2011)
(DFG: Deutsche Forschungsgemeinschaft)

Proposition 65: California, Safe Drinking Water and Toxic Enforcement Act of 1986

TRGS905: Technische Regeln für Gefahrstoffe (Deutsche)

(EC)No.1272/2008 AnnexVI Table3.2: Regulation(EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) AnnexVI Table3.2

UN: United Nations

TSCA: Toxic Substances Control Act (USA)