

## Safety Data Sheets

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### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier :

Product name : D-FC25-K  
e-STUDIO4540C/4540CSE Series  
SDS NO. DFC25KW-1

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

Developer for electrophotographic equipment

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer Toshiba TEC Corporation  
Address : Gate City Ohsaki West Tower 1-11-1, Osaki, Shinagawa-ku, Tokyo, 141-8562, Japan  
Telephone number : +81-3-6830-9100

#### Supplier

Toshiba America Business Solutions, Inc.

Emergency Telephone No. +1-800-424-9300 (CHEMTREC)

For calls within the U.S. only.

+1 703-527-3887 (collect calls accepted) (CHEMTREC)

Outside USA and Canada

Toshiba of Canada Limited

Telephone No. +1-905-470-3500

For calls within Canada only.

Toshiba TEC Germany Imaging Systems GmbH

Telephone No. +49-2131-1245-0

(European Headquarters)

Emergency telephone. No. +1 703-527-3887 (collect calls accepted) (CHEMTREC)

Toshiba Australia Pty, Ltd

Building C 12-24, Talavera Road, North Ryde, NSW 2113

Telephone No. +61-2-98876000 (Business hours)

Ph 13 11 26 (After hours, Australia)

(Poisons Information Centre)

Toshiba Tec Information Systems (ShenZhen) Co., Ltd

Emergency Telephone No. +86-755-27311901

For calls within China only.

Toshiba Singapore Pte Ltd

Telephone No. +65-6516-0380

Taishiba International Co. Ltd.

Telephone No. +866-2-25163388 Ext. 2750

For calls within Taiwan only.

## 2. Hazards identification

GHS classification and label elements of the product

### 2.1 Classification of the substance or mixture

#### HEALTH HAZARDS

Acute toxicity Oral :Out of class

Acute toxicity inhalation :Out of class

Skin corrosion/irritation :Out of class

Eye damage /eye irritation :Out of class

Sensitization-skin :Out of class

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

## 3. Composition/information on ingredients

Substance/Mixtures :

### 3.2 Mixtures

Ingredient name	content(%)	CAS No.
Ceramic materials and wares, chemicals (Ferrite)	>90	66402-68-4
Polyester resin	<10	-----
Carbon black	0.1 - 1	1333-86-4
Amorphous silica	0.1 - 1	7631-86-9

----- TRADE SECRET

## 4. First-aid measures

### 4.1 Descriptions of first-aid measures

#### Inhalation

Remove from exposure area to fresh air immediately.

Contact a physician if there is any difficulty in breathing or other signs of distress.

#### Skin Contact

Wash with soap and water.

If irritation occurs or is persistent, seek medical attention.

#### Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes.

If irritation persists, call a physician.

#### Ingestion

Dilute stomach contents with several glasses of water.

## 5. Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Foam, carbon dioxide, dry chemical, water fog

#### Unsuitable extinguishing media

None

### 5.2 Special Hazards

Can form explosive dust-air mixtures when finely dispersed in air.

### 5.3 Advice for firefighters

Special protective equipment and precautions for fire-fighters

Wear cold insulating gloves/face shield/eye protection.

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**6. Accidental release measures**

- 6.1 Personnel precautions, protective equipment and emergency procedures
  - Wear proper protective equipment.
  - Avoid breathing dust.
- 6.2 Environmental precautions
  - Do not wash away into shower or waterway.
- 6.3 Methods and materials for containment and cleaning up
  - Sweep slowly spilled toner/developer and carefully transfer into a waste container.

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**7. Handling and storage**

- 7.1 Precautions for safe handling
  - Preventive measures
    - Do not breathe dust.
  - Exhaust/ventilator
    - No special ventilation equipment is needed under intended use.
- 7.2 Conditions for safe storage, including any incompatibilities
  - Recommendation for storage
    - Keep cool.
    - Store in a dry place.
    - Keep out of reach of children.
- 7.3 Specific end use(s)
  - Developer for electrophotographic equipment

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**8. Exposure controls/personal protection**

- 8.1 Control parameters
  - ACGIH
    - (Carbon black)
    - ACGIH(2010) TWA: 3.5mg/m<sup>3</sup>(l)
  - OSHA-PEL
    - (Carbon black)
    - TWA 3.5mg/m<sup>3</sup>
    - (as the product)
    - TWA 15mg/m<sup>3</sup>(Total dust)
    - 5mg/m<sup>3</sup>(Respirable fraction)
  - DMG-MAK
    - (as the product)
    - 4mg/m<sup>3</sup>(Inhalable fraction)
    - 1.5mg/m<sup>3</sup>(Respirable fraction)
- 8.2 Exposure controls
  - Individual protection measures
    - Respiratory protection
      - Not required under intended use.
    - Hand protection
      - Not required under intended use.
    - Eye protection
      - Not required under intended use.
    - Skin and body protection
      - Not required under intended use.

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**9. Physical and Chemical Properties**

## 9.1 Information on basic physical and chemical properties

## Physical properties

Appearance : powder/granule

Color : black

Odor : None

Specific gravity/Density : 4.5-5.5g/cm<sup>3</sup>

## Solubility

Solubility in water : insoluble

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**10. Stability and Reactivity**

## 10.2 Chemical stability

Stable.

## 10.3 Possibility of hazardous reactions

None

## 10.5 Incompatible materials

None

## 10.6 Hazardous decomposition products

None

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**11. Toxicological Information**

## 11.1 Information on toxicological effects

## Acute toxicity

Acute toxicity (Oral), Product

LD<sub>50</sub> > 2,000mg/kg

(This was the highest attainable mass.)

Acute toxicity (Gases inhalation), Product

LC<sub>50</sub> > 5.13mg/l

(This was the highest attainable concentration.)

## Irritant properties

Skin corrosion/irritation

Non-irritant.

Serious eye damage /irritation

Non-irritant.

## Skin sensitization

Non-sensitizer

## Germ cell mutagenicity

Ames test : Negative

## Carcinogenicity

(Carbon black)

The IARC classified carbon black as a Group 2B carcinogen (possible human carcinogen).

But carcinogenicity was not observed with toner containing carbon black in chronic rat inhalation study.

No reproductive toxicity data available

Delayed and immediate effects and also chronic effects from short- and long-term exposure

## 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 (16 mg/m<sup>3</sup>) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m<sup>3</sup>) exposure group. These findings are attributed to "lung overloading", a general response to excessive amounts of any dust retained in the lungs for a prolonged period.

No Aspiration hazard data available

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**12. Ecological Information**

## 12.1 Toxicity

## Aquatic toxicity

## Aquatic acute toxicity component(s) data

This material has not been tested concerning environmental effects (fish toxicity, bird toxicity, invertebrate toxicity, phyto-toxicity and environmental fate).

No Persistence and degradability data available

No Bioaccumulative potential data available

No Mobility in soil data available

Ozone depleting chemical data not available

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**13. Disposal considerations**

## 13.1 Waste treatment methods

Dispose of in accordance with local, state and federal regulations.

Empty plastic container may be recycled.

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**14. Transport Information**

## UN No, UN CLASS

Not applicable to UN NO.

Land DOT 49 CFR,ADR :Not classified as Dangerous Goods

Sea IMDG Code :Not classified as Dangerous Goods

Air ICAO-TI :Not classified as Dangerous Goods

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**15. Regulatory Information**

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

## US/Canada Information

## Toxic Substance Control Act (TSCA)

All chemical substances in this product comply with all applicable rules or orders under TSCA.

## California Proposition 65

Not regulated.

## OSHA Hazard Communication Standard,29CFR 1910.1200

Not regulated.

## RCRA(40 CFR 261)

Product or components not listed.

## CERCLA/SARA Information

Not regulated.

## NTP Annual Report on Carcinogens

Not listed as an NTP carcinogen.

## Controlled Products Regulations(Canada)

This product has been classified in accordance with the hazard criteria of the CPR.

## Workplace Hazardous Materials Information System (Canada)

No toxicology information available.

## EU Information

## Regulation(EC)No.1907/2006(REACH)

All chemical substances in this product comply with all applicable rules or order under 1907/2006.

## Australian Information

Not classified as hazardous according to criteria of NOHSC

The substance is being imported or manufactured under a permit granted under section 21U

of the Industrial Chemicals (Notification and Assessment) Act 1989

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## 16. Other information

### Reference Book

Globally Harmonized System of classification and labelling of chemicals, (4th ed., 2011), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO6182012) 2012 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2014 TLVs and BEIs. (ACGIH)  
<http://monographs.iarc.fr/ENG/Classification/index.php>  
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)

### Definitions and Abbreviations

OSHA PEL stands for Permissible Exposure Limit under Occupational Safety and Health Administration (USA)  
ACGIH TLV stands for Threshold Limit Value under American Conference of Governmental Industrial Hygienists (USA)  
DFG-MAK stands for Maximale Arbeitsplatzkonzentrationen under Deutsche Forschungsgemeinschaft  
TWA stands for Time Weighted Average  
IARC stands for International Agency for Research on Cancer  
NTP stands for National Toxicology Program (USA)  
DOT stands for Department of Transportation (USA)  
NOHSC stands for National Occupational Health and Safety Commission (Australia)  
ADG stands for Australian Dangerous Goods

### Restrictions

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.