

# SAFETY DATA SHEET

Toner in Toner Cartridge and Drum Cartridge

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## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product name : Toner (TS3510AUS, DK3510AUS)  
Company name : Murata Machinery, Ltd.  
Address : 136, Takeda-Mukaishiro-cho, Fushimi-ku, Kyoto 612-8686, Japan  
Contact point : Communication Equipment Division Quality Assurance Group  
Telephone : +81-75-672-8279  
Facsimile : +81-75-672-5046

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## SECTION 2 HAZARDS IDENTIFICATION

### 2.1 Emergency Overview:

Black fine powder with little or no odor.  
Risk of dust-explosion if finely dispersed in air with an ignition source.

### 2.2 OSHA Regulatory Status:

Classification under GHS: Not classified  
GHS Label Elements: None

### 2.3 Potential Health Effects:

No significant hazards known. See SECTION 11 for details

### 2.4 Potential Environmental Effects:

No significant hazards known. See SECTION 12 for details

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## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

### Identification of Substance/Mixture: Mixture

Ingredient Name	Weight %	CAS No.
Saturated polyester resin	85-95	Confidential
Carbon Black	2-7	1333-86-4
Wax	1-3	Confidential
Silica	1-3	68909-20-6
Metal-complex salt	<1	Confidential

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## **SECTION 4 FIRST AID MEASURES**

### **Inhalation:**

Move to fresh air and gargle with water.

If accompanied with breathing difficulty, take first aid measures such as artificial respiration and call a physician immediately.

### **Skin contact:**

Wash with soap and water.

### **Eye contact:**

Do not rub. Flush with large amount of water until particles are removed.

Seek medical advice

### **Ingestion:**

Rinse mouth. Seek medical advice.

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## **SECTION 5 FIREFIGHTING MEASURES**

### **5.1 Suitable Extinguishing media:**

Water spray or fog, CO<sub>2</sub>, dry chemicals

### **5.2 Unsuitable Extinguishing media:**

Strong water current may cause powder to disperse and form explosive dust-air mixture.

### **5.3 Protection of firefighters**

Specific hazards arising from the chemical:

Fine powder may form explosive dust-air mixture if finely dispersed in air.

Fume and smoke may include toxic substances such as aromatic compounds.

Protective equipment and precautions for firefighters

Avoid inhalation of fume and smoke.

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## **SECTION 6 ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures:**

Avoid breathing dust. Dust-proof masks should be worn when working.

### **6.2 Environmental precautions:**

Do not flush into sewer or natural watercourse.

### **6.3 Methods for containment:**

Keep in air-tight container.

### **6.4 Methods for cleaning up:**

Sweep the spilled powder slowly.

Clean the remainder with wet cloth, wet paper, or vacuum cleaner.

Vacuum cleaner must be equipped with HEPA filter and must be explosion-proof.

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## **SECTION 7 HANDLING AND STORAGE**

### **7.1 Precautions for safe handling:**

Avoid breathing dust.

Keep away from ignition sources, especially where dust concentration may become high.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in a cool, dry location away from direct sunlight.

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## SECTION 8 Exposure controls/personal protection

### 8.1 Control parameters:

	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
As toner mixture	15mg/m <sup>3</sup> (Inhalable fraction) 5mg/m <sup>3</sup> (Resipable fraction)	N.E.	10mg/m <sup>3</sup> (Total dust) 3mg/m <sup>3</sup> (Resipable fraction)	N.E.
Carbon black	3.5mg/m <sup>3</sup>	N.E.	3.5mg/m <sup>3</sup>	N.E.
Silica	6mg/m <sup>3</sup>	N.E.	10mg/m <sup>3</sup> (Total dust) 3mg/m <sup>3</sup> (Resipable fraction)	N.E.

(N.E.= Not Established)

### 8.2 Engineering controls:

Use of local ventilation is recommended.

### 8.3 Personal protective equipment:

Eye/face protection: Protective goggles is recommended if necessary.  
Skin Protection: Not required  
Respiratory protection: Dust-proof mask should be used when handling bulk.

## SECTION 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties:

Appearance: Black powder  
Odor: Slight odor  
pH: Not applicable  
Melting point: App. 130°C (Flow temperature)  
Boiling point: No data  
Flash point: No data  
Evaporation rate: No data  
Flammability: Not flammable (according to GHS classification)  
Explosive limits: No data  
Vapour pressure: Not applicable  
Vapour density: Not applicable  
Relative density: 1.1-1.3  
Solubility: Insoluble to water, partially soluble to toluene and xylene.  
Partition coefficient: Not applicable  
Auto-ignition temperature: Not applicable  
Decomposition temperature: >200°C  
Viscosity: Not applicable  
Explosive properties: Can form explosive dust-air mixtures when finely dispersed in air  
Oxidizing properties: Not applicable

### 9.2 Other information:

Particle Size: app. 8.0µm (D<sub>50</sub>)

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## SECTION 10 Stability and reactivity

10.1 Reactivity:	None
10.2 Possibility of hazardous reactions:	None
10.3 Chemical stability:	Stable
10.4 Conditions to avoid:	None
10.5 Incompatible materials:	None
10.6 Hazardous decomposition products:	No data

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## SECTION 11 Toxicological information

### 11.1 Information on toxicological effects:

#### Acute toxicity:

Inhalation: LC<sub>50</sub> ; inh-rat>1.45mg/L/4 hours\*, not harmful.  
(maximum achievable concentration)

Ingestion: LD<sub>50</sub> > 2000mg/kg\*, not harmful

#### Irritation:

Eye: Not classified as irritant\* \*\*

Skin: Not classified as irritant\* \*\*

Corrosivity: Not available

Sensitisation: Not classified as a sensitizer\* \*\*

Carcinogenicity: Carbon black, contained in this toner, is classified as "group 2B"  
(possibly carcinogenic to humans) by IARC. However, long-term  
inhalation test on rats using a toner preparation containing carbon black  
did not show any carcinogenic effects.

Mutagenicity: Ames test negative

Reproductive toxicity: Not available

STOT –single exposure: Not available

STOT –RE: In study of rats exposed to a toner containing carbon black, mild degree  
of lung fibrosis was observed in groups exposed to high  
concentration(16mg/m<sup>3</sup>), and mid-concentration(4mg/m<sup>3</sup>), but no  
pulmonary change was reported in the group exposed to low  
concentration(1mg/m<sup>3</sup>).

In normal conditions of use (in electro-photographic apparatus,) maximum concentration of toner released is significantly lower than 1mg/m<sup>3</sup>, and will have no chronic effects to human health.

In cases where this product is used in bulk for purpose such as filling, cleaning, etc of the apparatus, exposure should be controlled with care according to Sections 7 and 8.

Aspiration hazards: Not available

*\*data from toner with similar composition.*

*\*\*according to GHS classifications*

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## SECTION 12 Ecological information

### 12.1 Ecotoxicity

Not available

### 12.2 Persistence and degradability

Not available

### 12.3 Bioaccumulative potential

Not available

### 12.4 Mobility in soil

Not available

### 12.5 Other adverse effects:

Not available

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## SECTION 13 Disposal consideration

Dispose according to local authority requirements.

DO NOT release to sewer or natural watercourse.

DO NOT put toner powder or container into fire.

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## SECTION 14 Transport information

### Basic shipping description

UN number: None

UN proper shipping name: None

Transport hazard class(es): None

Packing group: None

Environmental hazards:

Not classified as environmentally hazardous under UN Model Regulations and marine pollutant under IMDG Code.

### Additional information:

Handling such as exposure to water, rolling, falling, or giving shock to the container may result in breakage of the inner bag and result in scattering of the mixture.

Avoid direct sunlight and hot places. (See also: Section 7)

ADR / RID / ADN: not regulated

IMDG Code: not regulated

ICAO-TI / IATA-DGR: not regulated

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## SECTION 15 Regulatory information

### Federal Regulations

TSCA: All ingredients are on the inventory or exempt from listing.  
Material "Metal-complex salt" is subject to SNUR in 40 CFR 721.10089, but use as toner is not distinguished as the Significant New Use "Release to water."

SARA Title III Section 313:  
None

### State Regulations:

California Proposition 65:  
"Caron black" included in this toner is listed, but only airborne, unbound particles of respirable size are subject to the regulation. Thus carbon black bound inside toner is not subject to the Proposition.

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## SECTION 16 Other information

### Indication of changes:

Oct. 8, 2013: First issued  
Issued according to ANSI Z400.1/Z129.1-2010

### Abbreviations:

CAS:	Chemical Abstract Service
HEPA:	High Efficiency Particulate Air
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ACGIH:	American Conference of Governmental Industrial Hygienists
TLV:	Threshold Limit Value
TWA:	Time weighted Average
STEL:	Short Term Exposure Limit
LC <sub>50</sub>	Lethal Concentration to 50% of test population
LD <sub>50</sub>	Lethal Dose to 50% of test population
D <sub>50</sub>	volume-based median (50%) Diameter
IARC:	International Agency for Research on Cancer
STOT:	Specific Target Organ Toxicity
STOT RE	Specific Target Organ Toxicity –Repeated Exposure
UN	United Nations
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
ADN:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG	International Maritime Dangerous Goods
IATA-DGR:	International Air Transport Association Dangerous Goods Regulations
ICAO-TI:	Technical Instructions for the Safe Transport of Dangerous Goods by Air
TSCA:	Toxic Substances Control Act
SNUR:	Significant New Use Rule
SARA:	Superfund Amendments and Reauthorization Act
ANSI:	American National Standard Institute

**Relevant identified uses:** Toner for electrophotographic apparatus

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Although the information contained in this SDS is prepared to be accurate to the best of our knowledge, please be aware that health and hazard assessment may not be enough and complete.

Since SDS may be revised due to regulation changes or product modifications, please confirm if this is the latest version.