TOSHIBA MATERIAL SAFETY DATA SHEET

Date of Preparation : January 31, 2002 MSDS No. TFC31KWJ1W
Date of Revised :

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : T-FC31-K Black Toner
Used for : FC-210/310 Toshiba Copier
Company Name : Toshiba TEC Corporation
Address : 1-1, Kanda nishikichou, Chiyoda-ku, Tokyo 101-8442, Japan
Telephone Number : +81-3-3438-6854
Manufacturer Name : (1) Toshiba TEC Corporation, Mishima Works
6-78, Minami-cho, Mishima-shi, Shizuoka-ken, 411-8520 Japan

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(4) Toshiba (Australia) Pty, Ltd.
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SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS No.	wt.%	OSHA PEL	ACGIH TLV
Polyester resin	- - -	- - -	Not listed	Not listed
Carbon black	1333-86-4	5 - 7	3.5 mg/m^3	3.5 mg/m^3
wax	- - -	- - -	Not listed	Not listed
silica	68909-20-6	2 - 4	Not listed	Not listed
Titanium-dioxide	220037-19-4	<2	Not listed	Not listed

- - - : TRADE SECRET

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview : Product is stable, nonflammable powder. If used as intended, the product does not present an acute or chronic health hazard.
Physical Hazards : This product is not classified as flammable or combustible. It will burn in case of fire. Avoid contact with strong oxidizers such as chromate, bromate and nitrates.
Routes of Exposure : Inhalation, dermal contact, incidental ingestion
Inhalation : Excessive inhalation may cause irritation of the nose, throat and respiratory tract.
Eye Contact : Not an irritant.
Dermal Contact : Not an irritant; not a sensitizer.
Ingestion : None currently known.
Chronic Effects/Carcinogenicity : See Section 11 Supplemental Health Information.
Reproductive/Developmental: None identified.

Target Organs : Prolonged breathing of high concentrations may cause adverse effects on the respiratory system.

Signs and Symptoms of Exposure : Prolonged exposure to dusts of this product may irritate the respiratory system.

Medical Conditions Aggravated by Exposure to This Product :
Respiratory disorders, such as asthma, may be aggravated by prolonged exposure to high concentrations of this product.

SECTION 4 FIRST AID MEASURES

Eye Contact : Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, call a physician.

Skin Contact : Wash with soap and water. Wash clothing before reuse. If irritation occurs or is persistent, seek medical attention.

Ingestion : Dilute stomach contents with several glasses of water.

Inhalation : Remove from exposure area to fresh air immediately. Contact a physician if there is any difficulty in breathing or other signs of distress.

SECTION 5 FIRE FIGHTING MEASURES

General Hazard : Product will not burn in case of fire.

Flash Point : Not applicable

Flammable Limits : Not applicable

Autoignition Temperature: Not applicable

Flammability classification : Not applicable

Extinguishing Media : Foam, halon, carbon dioxide, dry chemical & water fog.

Unusual Fire & Explosion Hazard : Combustible powder. Dust of this product at sufficient concentrations can form explosive mixtures with air.

Fire Fighting Procedures : None

Hazardous Combustion Products : Carbon monoxide, carbon dioxide and smoke.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spills or Leaks : Vacuum-clean spilled toner and carefully transfer into sealable waste container. If no vacuum-cleaner is available, sweep slowly to minimize generation of dust during clean-up. Residue can be removed with soap and cold water.

SECTION 7 HANDLING AND STORAGE

Handling : Avoid dust, keep away from ignition sources.

Prevention of Fire and Explosion : This material is capable of creating a dust explosion. Keep away from heat, sparks & flame.

Storage : Keep container in cool and dry area.

Hygienic Practices : Avoid inhalation and ingestion. Avoid getting in eyes, on skin or clothing. Wash hands thoroughly after handling, and before eating, drinking, or smoking.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits	: OSHA (TWA/PEL as the product)	15mg/m^3 (Total dust)
		5mg/m^3 (Respirable dust)
	ACGIH(TWA/TLV as the product)	10mg/m^3 (Total dust)
	DFG-MAK	6mg/m^3 (Total dust)
Engineering Controls	: Maintain adequate ventilation.	
Eye Protection	: Not required under intended use.	
Skin Protection	: Not required under intended use.	
Respiratory Protection	: Not required under intended use.	

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Fine solid powder
Color	:	Black
Scent	:	Odorless
Melting Point	:	110C - 150C (Softening point)
Specific Gravity(H_2O=1)	:	1.1 - 1.5
Vapor Pressure	:	Not applicable
Vapor Density (Air=1)	:	Not applicable
Evaporation Rate	:	Not applicable
Solubility in Water	:	Negligible
pH Value	:	Not a water-based product, therefore not applicable.

SECTION 10 STABILITY AND REACTIVITY

Stability	:	Stable
Incompatibility	:	None identified.
Hazardous Decomposition Products	:	Carbon monoxide and carbon dioxide.
Hazardous Polymerizatior	:	Will not occur.

SECTION 11 SUPPLEMENTAL HEALTH INFORMATION

Acute oral toxicity	:	LD50 is greater than 5,000mg/kg. (Estimated from other products containing same materials)
Acute inhalation	:	LC50(4H) is in excess of 5.37mg/l. (This was the highest attainable concentration.) (Estimated from other products containing same materials)
Eye irritation	:	Non irritant. (Estimated from other products containing same materials)
Skin irritation	:	Non irritant. (Estimated from other products containing same materials)
Skin sensitization	:	Non sensitization. (Estimated from other products containing same materials)
Mutagenicity	:	Negative in the Ames test.

Carcinogenicity : In 1996, the IARC classified carbon black as a Group 2B carcinogen (possible human carcinogen).

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/m3)exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4 mg/m3) 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.

SECTION 12 ECOLOGICAL INFORMATION

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

SECTION 13 DISPOSAL CONSIDERATION

Dispose of in accordance with local, state and federal regulation.
Empty plastic container may be recycled.

SECTION 14 TRANSPORTATION INFORMATION

Special Precautions : None
International Transport Information
UN Classification Number : Not applicable
DOT Identification Number : Not applicable
Domestic Transportation : Not applicable
Other Information : Not applicable

SECTION 15 REGULATORY INFORMATION

US/Canada Information
OSHA Hazard Communication Standard, 29CFR 1910. 1200 : Not regulated
Toxic Substance Control Act (TSCA) : All chemical substances in this product comply with all applicable rules or orders under TSCA.
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.
IARC : See section 11.
California Proposition 65 : Neither toner, or any of the components, are listed as chemicals known to the State of California to cause cancer or reproductive system effects.
Controlled Products Regulations(Canada) :
This product has been classified in accordance with the hazard criteria of the CPR.
Other State Regulations : Carbon black is listed in the New Jersey Right to Know List, Pennsylvania Hazardous Substance List, and Massachusetts Substance List.
U.S./Canada Label Statements :
LOW HAZARD FOR RECOMMENDED HANDLING. Minimize dust generation and accumulation. Use with adequate ventilation.

EU Information
Label Information According to Directives 67/548 EEC & 88/379 EEC :
Symbol & Indication : Not required
Risk Phrase : Not required
Safety Advise Phrase : Not required
EEC Directive(76/548 EEC, 79/831 EEC, 92/32 EEC) :
All chemical substances in this product comply with all applicable rules or order under EEC Directive.
The Subject of Specific Provisions in Relation to Protection of Man or the Environment. Directive 76/769/EEC : Not required
National requirement : No specific regulations or restrictions.

SECTION 16 OTHER INFORMATION

National Fire Protection Association (NFPA) Classification :

Flammability : 1
Reactivity : 0
Health : 0
(0 = insignificant, 1 = slight)

Hazardous Materials Information Systems (HMIS) :

Red (Flammability) : 1
Yellow (Reactivity) : 0
Blue (Acute Effects) : 0
(0 = insignificant, 1 = slight)

Notice : Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, Toshiba Corporation extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes

References : IARC (1996) IARC Monographs on the Evaluation of the Carcinogenic Risks of Chemicals to Humans, Vol. 65, Printing Processes and Printing Inks, Carbon Black and Some Nitro Compounds, Lyon, pp. 149-261.

H. Muhle, B. Bellmann, O. Creutzenberg, C. Dasenbrock, H. Ernst, R. Kilpper, J. C. MacKenzie, P. Morrow, U. Mohr, S. Takenaka, and R. Mermelstein (1991). Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats, Fundamental and Applied Toxicology 17, pp. 280-299.or for consequences of its use.

Abbreviation :

(1) OSHA PEL stands for Permissible Exposure Limit under Occupational Safety and Health Administration (USA).
(2) ACGIH TLV stands for Threshold Limit Value under American Conference of Governmental Industrial Hygienists (USA).
(3) DFG-MAK stands for Maximale Arbeitsplatzkonzentrationen under Deutsche Forschungsgemeinschaft.
(4) TWA stands for Time Weighted Average.
(5) IARC stands for International Agency for Research on Cancer.
(6) NTP stands for National Toxicology Program (USA).
(7) NIOSH stands for National Institute for Occupational Safety and Health (USA).
(8) DOT stands for Department of Transportation (USA).

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