TOSHIBA **MATERIAL SAFETY DATA SHEET**

Date of Preparation : June 22, 2001 MSDS : T1200KAJ1W
Date of Revised : September 30, 2002

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : T-1200
Used for : Toshiba Copiers, e-STUDIO 12, 15, 120 and 150
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SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS No.	wt.%
Styrene acrylate copolymer	-------	85-95
Carbon black	1333-86-4	5-10
Inorganic Pigment	-------	1-5
Metal Complex dye	109125-51-1 109125-50-0 84179-66-8	1-5
	-------	Trade Secret

SECTION 3 HAZARDS IDENTIFICATION

Most Important Hazards and Effects of the Products
Human Health Effects : There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner. When used as intended according to instructions, studies do not indicate any symptoms of fibrosis will occur.
Environmental Effects : No data are available.
Specific hazards : Dust explosion (like most finely divided organic powders)

SECTION 4 FIRST AID MEASURES

Route(s) of Entry

Inhalation?	:	Yes
Skin?	:	No
Ingestion ?	:	Possible but very unusual.
Inhalation	:	Remove to fresh air . If symptoms occur, consult medical personnel.
Skin Contact	:	Wash with soap and water for 15 minutes or until particle is removed. It irritation does occur, consult medical personnel.
Eye Contact	:	Flush eyes immediately with water for 15 minutes. If irritation does occur, consult medical personnel.
Ingestion	:	Rinse with water and drink several glasses of water . If irritation or discomfort does occur, consult medical personnel.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media	:	Water , CO_2, foam and dry chemicals
Special Fire fighting Procedur	:	None
Fire & Explosion Hazards	:	Toner material, like most finely divided organic powders, may form an explosive mixture.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	:	None
Environmental Precautions	:	None
Methods for Cleaning Up	:	Wipe off with paper or cloth. Do not use vacuum cleaner when a large amount is released. It, like most finely divided organic powders, is capable of creating a dust explosion.

SECTION 7 HANDLING AND STORAGE

Handling

Technical Measures	:	None
Precautions	:	None
Safe Handling Advice	:	Use of a dust mask is recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust. Try not to disperse the particles.

Storage

Technical h4easupes	:	None
Storage Conditions	:	Keep container closed and store in a cool and dry place. Keep out of the reach of children.
Incompatible Products	:	None

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures

Ventilation None required with intended use.

Exposure Limits

OSHA PELs (TWA)

as the product : 15mg/m^3 (Total dust)
5mg/m^3 (Respirable fraction)

Carbon black : 3.5 mg/m^3

Metal Complex dye : 0.5 mg/m^3

Other substances : Not listed

ACGIH TLVs (TWA)

as the product : 10mg/m^3 (Total dust)
3mg/m^3 (Respirable fraction)

Carbon black : 3.5 mg/m^3

Metal Complex dye : 0.5 mg/m^3

Other substances : Not listed

DFG-MAK (TWA)

as the product : 4mg/m^3 (Inhalable fraction)
1.5mg/m^3 (Respirable fraction)

All substances : Not listed

NOHSC (TWA)

All substances : Not listed

Personal Protective Equipment

Respiratory Protection : Not required under intended use.

Hand Protection : Not required under intended use.

Eye Protection : Not required under intended use.

Skin Protection : Not required under intended use.

Other Protective Equipmen : Not required under intended use.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State : Solid

Form : Powder

Color : Black

Scent : Odorless

Melting Point : Not applicable

Softening point : 111 - 130 degree

Flash Point : Not applicable

Ignition Point : >350 degree

Specific Gravity(H2O=1) : 1.1 - 1.5

Explosion Properties : : No data

Solubility in Water : Negligible

pH Value : Not a water-based product, therefore not applicable.

SECTION 10 STABILITY AND REACTIVITY

Stability	:	Stable
Hazardous Reactions	:	Dust explosion, like most finely divided organic powders.
Conditions to avoid	:	Electric discharge, throwing into fire.
Materials to avoid	:	Oxidizing Materials
Hazardous Decomposition Products	:	CO,CO_2 and NOx
Further Information	:	None

SECTION 11 SUPPLEMENTAL HEALTH INFORMATION

Acute oral toxicity	:	LD50 is greater than 2,000mg/kg. (This was the highest attainable mass.)
Acute inhalation	:	LC50(4H) is in excess of 4.97mg/l. (This was the highest attainable concentration.)
Eye irritation	:	Non-irritant.
Skin irritation	:	Non-irritant.
Skin sensitization	:	Non-sensitiser.
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/m^3)exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4 mg/m^3) exposure group. These findings are attributed to "lung overloading", a general response to excessive amounts of any dust retained in the lings for a prolonged period.

SECTION 12 ECOLOGICAL INFORMATION

No data available.

SECTION 13 DISPOSAL CONSIDERATION

Waste from residues	:	Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.
Contaminated Packaging	:	Waste may be disposed or incinerated under conditions which meet all federal, state and local environmental regulations.

SECTION 14 TRANSPORTATION INFORMATION

UN Classification Number		:	None
Land	DOT(USA)	:	None
Sea	IMDG	:	None
Air	ICAO-TI	:	None

SECTION 15 REGULATORY INFORMATION

US Information

Toxic Substance Control Act (TSCA)

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

SARA(Superfund Amendments and Reauthorization Act) Title lll

302 Extreme Hazardous Substance

: None

311/312 Hazard Classification

: None

EU Information

67/548/EEC & 1999/45/EC

Symbol & Indication : Not required

Risk Phrase : Not required

Safety Advise Phrase : Not required

76/769/EEC : All chemical substances in this product comply with all applicable rules or order under 76/769/EEC.

SECTION 16 OTHER INFORMATION

National Fire Protection Association (NFPA) Classification

Flammability : 1

Reactivity : 0

Health : 1

(0 = insignificant, 1 = slight)

WHMIS Legislation (Canada) : This product is not a controlled product.

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 or for consequences of its use.

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.

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).
(9) NOHSC stands for National Occupational Heath and Safety Commission (Australia).

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