

S H A R P

Date Revised: August 15, 1997

Date Issued : August 1, 1996

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. B-1003

Section 1. Product Identification

Product :

FO-35TD, FO-32TD, UX-30TD (Toner Imaging Cartridge))

Section 2. Supplier's Name and Address

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, Japan

Local suppliers are listed below. Please contact the nearest supplier for additional information.

(Country)	(Name and Telephone Number)
U.S.A.	Sharp Electronics Corporation Telephone number for information: 1-800-237-4277 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information: 905-890-2100 Emergency telephone number : 1-800-255-3924
United Kingdom	Sharp Electronics (U.K.) Ltd. Telephone number for information: 01923-474013

Section 3. Ingredients

Ingredients	CAS No.	Proportion	OSHA PEL	ACGIH TLV	Other Limits
Polyester Resin (NJ TSNR 361615-5042-P)		> 88%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 5%	3.5mg/m ³	3.5mg/m ³	None
Organic pigment (NJ TSNR 361615-5025-P)		< 3%	Not listed	Not listed	None
Polypropylene	25085-53-4	< 3%	Not listed	Not listed	None
Amorphous silica	7631-86-9	< 1%	Not listed	Not listed	None

Section 4. Hazardous Identification (Emergency Overview)

Toner is a fine, black powder possessing no immediate hazard. 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.

Section 5. Health Hazard Data

Route(s) of Entry : Inhalation? Skin? Ingestion?
Yes No Possible but very unusual.

Health Hazards : This material does not represent a health hazard.

Carcinogenicity : In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Chronic Effect : In a study in rats of 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/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m³) exposure group, but no pulmonary change was reported in the lowest (1mg/m³) exposure group, the most relevant level to potential human exposures.

Signs and Symptoms of Exposure :

Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust. May cause coughing and raise phlegm

Medical Conditions Generally Aggravated by Exposure : None

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MATERIAL SAFETY DATA SHEET (2/2)

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Section 5. Health Hazard Data (Continued)

Emergency and First Aid Procedures :

- Inhalation --- Remove to fresh air. Wash nostrils and rinse out mouth. If effects occur, consult medical personnel.
- Ingestion --- Dilute stomach contents with several glasses of water.
- Skin --- Wash with soap and water.
- Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Softening point: 120-130 ⁰ C*	Specific Gravity	: 1.1
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: 6-7
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Faint odor		

Section 7. Fire and Explosion Data

- Flash Point (Method Used) : Not applicable
- Ignition Temperature : 450⁰C*
- Flammable Limits : (LEL); Not applicable (UEL); Not applicable
- Extinguishing Media : Dry chemical, foam or water
- Special Fire Fighting Procedure : Avoid inhalation of smoke. Wear self contained breathing apparatus and full protective gear.
- Unusual Fire and Explosion Hazard : If dispersed in air, toner, like most fine, organic powders, may form an explosive mixture.
- Sensitivity to Mechanical Impact : None
- Sensitivity to Static Charge : When suspended in air, it is sensitive to static charges and combustible.

Section 8. Reactivity Data

- Stability : Stable
- Incompatibility (Material to Avoid) : None
- Hazardous Decomposition : Products of combustion are toxic. Avoid inhalation of the smoke.
- Hazardous Polymerization : Will not occur.

Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):

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.

- Engineering Control / Ventilation : Not required.
- Work / Hygienic Practice : Inhalation should be minimized as with any non-toxic dust.
- Steps to be taken in case of Spill or Leak : Sweep up or clean up with vacuum cleaner.
- Waste Disposal Method : Waste material may be disposed under conditions which meet all federal, state and local environmental regulations.

Section 10. Regulatory Information

- NFPA Rating (U.S.A.) : Health = 1 Flammability = 1 Reactivity = 0
- WHMIS Legislation (Canada) : This product is not a controlled product.
- Transport Information : This product is not a hazardous material.
- UN No. : None allocated.

Section 11. Other Information

- References : IARC (1996) IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 65, Printing Process 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

* Information is based on data gathered for other toner products with the same or similar ingredients.