SHARP

MATERIAL SAFETY DATA SHEET

Date Revised : Mar.7, 2011
Date Issued : Jul.26,2010
MSDS No. F-01901

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : MX-23NT-BA/MX-23GT-BA/MX-23FT-BA
MX-23AT-BA/MX-23BT-BA/MX-23CT-BA (Black Toner)

Supplier Identification : Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan

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

Area	(Country)	(Local suppliers)
North America	U.S.A.	Sharp Electronics Corporation Sharp Plaza, Mahwah, New Jersey 07495-1163 Telephone number : 800-237-4277 Emergency telephone number : 800-255-3924
	Canada	Sharp Electronics of Canada Ltd. 335 Britannia Road East, Mississauga, Ontario L4Z 1W9 Telephone number : 905-890-2100 Emergency telephone number : 1-800-255-3924
Oceania	Australia	Sharp Corporation of Australia PTY. Ltd. No1 Huntingwood Drive Huntingwood Blacktown N.S.W. Telephone number : 1300-13-50-22
Europe	Germany	Sharp Electronics (Europe) GMBH Sonninstrasse 3, 20097 Hamburg Telephone number : 040-2376-2185
	United Kingdom	Sharp Electronics (U. K.) Ltd. 4 Furzeground Way, Stockley Park, Uxbridge Middlesex, UB11 1EZ Telephone number : 08705-274-277
	France	Sharp Electronics France S.A. 22, Avenue des Nations, Paris Nord 2, BP 52094 / 95948 Roissy-Charles de Gaulle, Cedex Telephone number : 01-49-90-34-00
	Austria	Sharp Electronics (Europe) GmbH Handelskai 342 1020 Wien Telephone number : 01-727-19-0
	Italy	Sharp Electronics (Italy) S.P.A. Via Lampedusa, 13 20141 Milano Telephone number : 02895951
	Spain	Sharp Electronics (Espana) S.A. Calle Sena, 2-10 Poligono Industrial Can Sant Joan. Parcela 8, 08174 Sant Cugat Del Valles Telephone number : 93-581-97-00
	Netherlands	Sharp Electronics Benelux B.V. P.B. 900 Meidoornkade 10, 3992 AE Houten Telephone number : 30-6359500
	Sweden	Sharp Electronics Nordic AB Box 14098, Gustavslundsvagen 12, SE-167 14, Bromma Telephone number : 08-634-36-00
	Switzerland	Sharp Electronics(Schweiz)AG Moosstrasse 2, Postfach 321 8803 Ruschlikon Telephone number : 01-846-6111
Middle East	U.A.E.	Sharp Middle East FZE P.O.Box 17115 Jebel Ali, Dubai Telephone number : 04-8815311

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance[ ] **Preparation[X]**

Ingredient	CAS No.	Proportion	OSHA PEL	ACGIH TLV	MAK-TWA	NOHSC- TWA
Polyester resin	Confidential	80-90%	Not listed	Not listed	Not listed	Not listed
Carbon black	1333-86-4	5-10%	3.5mg/m^3	3.5mg/m^3	Not listed	3mg/m^3
Wax	Confidential	1-5%	Not listed	Not listed	Not listed	Not listed
Iron Oxide	1309-38-2	1-5%	Not listed	Not listed	Not listed	Not listed
Amorphous silica	68909-20-6	1-5%	80mg/m^3	2mg/m^3	Not listed	Not listed

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 **:** Not toxic to aquatic organisms
[Estimated from the other product containing similar material]

Specific hazards **:** Dust explosion (like most finely divided organic powders)

Directive 1999/45/EC(Europe) **:** Not classified as dangerous

Australian Information **:** Not classified as hazardous according to criteria of NOHSC.

4. FIRST-AID MEASURES

Route(s) of Entry :	Inhalation?	Skin?	Ingestion?
	Yes	No	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. If 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.

5. FIRE –FIGHTING MEASURES

Extinguishing Media **:** Water , CO_2, foam and dry chemicals

Special Fire fighting Procedures **:** None

Fire and Explosion Hazards **:** Toner material, like most finely divided organic powders, may form an explosive mixture.

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.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures Ventilation : Not required under intended use.

Exposure limit values

OSHA-PEL(USA) : 15mg/m^3 (Total Dust) , 5mg/m^3 (Respirable Dust)
ACGIH-TLV(USA) : 10mg/m^3 (Total Dust) , 3mg/m^3 (Respirable Dust)

Personal Protective Equipment

Respiratory Protection : None required when used as intended in Sharp equipment.
Hand Protection : None required when used as intended in Sharp equipment.
Eye Protection : None required when used as intended in Sharp equipment.
Skin Protection : None required when used as intended in Sharp equipment.
Other Protective Equipment : Use of a dust mask and goggles are recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Physical State : Solid Form: Powder Color: Black Odor: odorless
Ph : Not applicable
Boiling/Melting Point : Not applicable
Softening Point(°C) : 100 - 130
Flash Point(°C) : Not applicable
Ignition Point(°C) : No data
Explosion Properties : No data
Density(g/cm³) : Approx. 1.1 (bulk density : Approx. 0.4)
Solubility in water : Negligible

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 NO_X
Further Information : None

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Ingestion(oral) : LD_{50}>2000mg/kg(Rats) [Estimated from the other product containing similar material]
Inhalation : LC_{50}>5.00mg/l (Rat,4hr) [Estimated from the other product containing similar material]
Eye irritation : Not an irritant(Rabbits) [Estimated from the other product containing similar material]
Skin irritation : Not an irritant(Rabbits) [Estimated from the other product containing similar material]
Skin sensitizer : Not sensitized [Estimated from the other product containing similar material]

Mutagenicity : Negative(Ames Test) [Estimated from the other product containing similar material]

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 , where carbon black is bound in a resin matrix, 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/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in22% of the animals in the middle (4mg/m^3) exposure group, but no pulmonary change was reported in the lowest (1mg/m^3) exposure group, the most relevant level to potential human exposures.

12. ECOLOGICAL INFORMATION

Ecotoxicity

On available data, toner is not harmful to aquatic organisms
[Estimated from the other product containing similar material]

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

UN Classification : None
Not classified as hazardous for transport.

15. REGULATORY INFORMATION

US Information

TSCA(Toxic Substances Control Act) :

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

SARA(Superfund Amendments and Reauthorization Act) Title III

302 Extreme Hazardous Substance : None

311/312 Hazard Classification : None

EU Information

1999/45/EC and 67/548/EEC

Symbol & Indication : Not required

R-Phrase : Not required

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

16. OTHER INFORMATION

NFPA Rating（USA） : Health=1 Flammability=1 Reactivity=0

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

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.

The information on this data sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. However, all materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we do not guarantee that these are the only hazards which exist.