

Date Revised : Jul. 22, 2013  
 Date Issued : Nov.30, 2000  
 MSDS No. F-31011

### 1.PRODUCT AND COMPANY IDENTIFICATION

**Product Name** : AR-450ND/AR-450DV/AR-450SD/AR-450SD-C (Black Developer)  
 DM-350DV/DM-350SK/DM-350SK1 (Black Developer)

**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)	(Name and Telephone Number)
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

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### 2.COMPOSITION / INFORMATION ON INGREDIENTS

Substance[ ]	Preparation[X]					
<u>Ingredient</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>MAK-TWA</u>	<u>NOHSC-TWA</u>
Ceramic Materials	66402-65-4	90-99%	Not listed	Not listed	Not listed	Not listed
Polyester resin	Confidential	1-5%	Not listed	Not listed	Not listed	Not listed
Silicone resin	Confidential	1-5%	Not listed	Not listed	Not listed	Not listed
Carbon black	1333-86-4	0.1-1%	3.5mg/m <sup>3</sup>	3.5mg/m <sup>3</sup>	Not listed	3mg/m <sup>3</sup>

### 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)

**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? 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.  
 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<sub>2</sub>, 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.

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**7.HANDLING AND STORAGE**

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**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

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**8.EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**Engineering Measures**

Ventilation : Not required under intended use.

**Exposure Limit Values**OSHA-PEL(USA) : 15mg/m<sup>3</sup> (Total Dust) , 5mg/m<sup>3</sup> (Respirable Dust)ACGIH-TLV(USA) : 10mg/m<sup>3</sup> (Total Dust) ,3mg/m<sup>3</sup> (Respirable Dust)**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 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.

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**9.PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance**

Physical State : Solid                      Form : Powder                      Color : Black                      Odor : odorless

**Ph** : Not applicable**Boiling / Melting Point** : Not applicable**Flash Point(°C)** : Not applicable**Ignition Point(°C )** : No data**Explosion Properties** : No data**Density(g/cm<sup>3</sup>)** : 6 (bulk density : 2.35)**Solubility in Water** : Negligible

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**10.STABILITY AND REACTIVITY**

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**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<sub>2</sub> and NO<sub>x</sub>**Further Information** : None

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**11.TOXICOLOGICAL INFORMATION**

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**Acute Toxicity**

Ingestion(oral) : LD<sub>50</sub> > 2000mg/kg (Rats)  
Inhalation : No Data  
Eye irritation : Not an irritant (Rabbits)  
Skin irritation : Not an irritant (Rabbits)  
Skin sensitizer : No sensitization

**Mutagenicity** : Negative (Ames Test)

**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/m<sup>3</sup>) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m<sup>3</sup>) exposure group, but no pulmonary change was reported in the lowest (1mg/m<sup>3</sup>) exposure group, the most relevant level to potential human exposures.

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**12.ECOLOGICAL INFORMATION**

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No data are available.

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**13.DISPOSAL CONSIDERATIONS**

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**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.

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**14.TRANSPORT INFORMATION**

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UN Classification : None  
Not classified as hazardous for transport.

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**15.REGULATORY INFORMATION**

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## 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.

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**16.OTHER INFORMATION**

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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.

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