



Material Safety Data Sheets
SD Series
Corporate Copiers

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MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-00601

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

- Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: 1.1
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: Not applicable
Ignition Temperature	: > 350°C
Flammable Limits	: (LEL); Not applicable (UEL); Not applicable
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: None
Unusual Fire and Explosion Hazard	: This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: None
Hazardous Decomposition	: CO and NO _x
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

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-00651

Section 1. Product Identification

Product :

SD-365NT/SD-365T/SD-365ST (Black Toner)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Styrene-Acrylate copolymer	25767-47-9	> 85%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 7%	3.5mg/m ³	3.5mg/m ³	None
Organic ammonium salt	160236-81-7	< 2%	Not listed	Not listed	None
Polypropylene	9003-07-0	<1.5%	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 : Acute oral toxicity --- LDL_0 of this toner is over 2,000mg/kg.

Mutagenicity --- The result of Ames test is negative.

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.

Medical Conditions Generally Aggravated by Exposure : None

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-00651

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.

Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: 1.1
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: Not applicable
Ignition Temperature	: > 350°C
Flammable Limits	: (LEL); Not applicable (UEL); Not applicable
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: None
Unusual Fire and Explosion Hazard	: This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: None
Hazardous Decomposition	: CO and NO _x
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

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-00741

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.

Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: 1.1
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: Not applicable
Ignition Temperature	: > 350°C
Flammable Limits	: (LEL); Not applicable (UEL); Not applicable
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: None
Unusual Fire and Explosion Hazard	: This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: None
Hazardous Decomposition	: CO and NO _x
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

Date Revised: August 15, 1997

Date Issued : August 1, 1997

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-00751

Section 1. Product Identification**Product :**

SD-475MT/SD-475CT/SD-475LT (Black Toner)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Styrene-Acrylate copolymer	25767-47-9	> 85%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 7%	3.5mg/m ₃	3.5mg/m ₃	None
Organic ammonium salt	160236-81-7	< 2%	Not listed	Not listed	None
Polypropylene	9003-07-0	< 1.5%	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 : Acute oral toxicity --- LDL_0 of this toner is over 2,000mg/kg.

Mutagenicity --- The result of Ames test is negative.

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.

Medical Conditions Generally Aggravated by Exposure : None

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-00751

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

- Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

Boiling/Melting Point	: Not applicable	Specific Gravity	: 1.1
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: Not applicable
Ignition Temperature	: > 350°C
Flammable Limits	: (LEL); Not applicable (UEL); Not applicable
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: None
Unusual Fire and Explosion Hazard	: This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: None
Hazardous Decomposition	: CO and NO _x
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

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-0401

Section 1. Product Identification

Product :

SD-360T/SD-360NT (Black Toner)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Styrene-Acrylate copolymer	25767-47-9	> 90%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 6%	3.5mg/m ₃	3.5mg/m ₃	None
Organic ammonium salt	102561-46-6	< 2%	Not listed	Not listed	None
Polypropylene	9003-07-0	< 2%	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 : Acute oral toxicity --- LDL_0 of this toner is over 2,000mg/kg.

Mutagenicity --- The result of Ames test is negative.

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.

Medical Conditions Generally Aggravated by Exposure : None

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-0401

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: 1.1
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used) : Not applicable
Ignition Temperature : > 350°C
Flammable Limits : (LEL); Not applicable (UEL); Not applicable
Extinguishing Media : CO₂, dry chemical, foam or water
Special Fire Fighting Procedure : None
Unusual Fire and Explosion Hazard : This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact : None
Sensitivity to Static Charge : None

Section 8. Reactivity Data

Stability : Stable
Incompatibility (Material to Avoid) : None
Hazardous Decomposition : CO and NO_x
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

Date Revised: August 7, 1998

Date Issued : April 25, 1996

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-30601

Section 1. Product Identification**Product : ***

SD-485ND/SD-485DV ("Lot No. TH..."Black Developer)

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
Ferrite		> 95%			
Zinc oxide	1314-13-2		5mg/m ³	10mg/m ³	None
Iron oxide	1309-37-1		Not listed	Not listed	None
Copper oxide	1317-38-0		Not listed	Not listed	None
Styrene-Acrylate copolymer	25767-47-9	< 4%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 0.4%	3.5mg/m ³	3.5mg/m ³	None

Section 4. Hazardous Identification (Emergency Overview)

Developer is a black powder containing small amounts of toner, and possessing no immediate hazard. There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner.

Section 5. Health Hazard Data**Route(s) of Entry : Inhalation?**

Yes

Skin?

No

Ingestion?

Possible but very unusual.

Health Hazards : Acute oral toxicity --- LDL_0 of the toner which is included in this developer is over 2,000mg/kg.
Mutagenicity --- The toner, which is included in this developer has been tested on the Ames test.
The result is negative.

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. While there have been no studies to date using developer, a two-year cancer bioassay using a typical toner preparation containing carbon black (a small amount of toner is included in the developer mixture) demonstrated no association between toner exposure and tumor development in rats.

Signs and Symptoms of Exposure : Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : None

***The Developer Lot Number appears on the developer container.**

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-30601

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: about 5
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used) : Not applicable
Ignition Temperature : > 350°C
Flammable Limits : (LEL); Not applicable (UEL); Not applicable
Extinguishing Media : CO₂, dry chemical, foam or water
Special Fire Fighting Procedure : None
Unusual Fire and Explosion Hazard : This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact : None
Sensitivity to Static Charge : None

Section 8. Reactivity Data

Stability : Stable
Incompatibility (Material to Avoid) : None
Hazardous Decomposition : CO and NO_x
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

Date Revised: Feb. 1, 1997

Date Issued : Sept. 2, 1996

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-30651

Section 1. Product Identification**Product :**

SD-365ND/SD-365DV/SD-365SD (Black Developer)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Ferrite		> 94%	Not listed	Not listed	None
Zinc oxide	1314-13-2				
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Styrene-Acrylate copolymer	25767-47-9	< 5%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 0.4%	3.5mg/m ₃	3.5mg/m ₃	None

Section 4. Hazardous Identification (Emergency Overview)

Developer is a black powder containing small amounts of toner, and possessing no immediate hazard. There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner.

Section 5. Health Hazard Data**Route(s) of Entry : Inhalation?**

Yes

Skin?

No

Ingestion?

Possible but very unusual.

Health Hazards : Acute oral toxicity --- LDL_0 of the toner which is included in this developer is over 2,000mg/kg.
Mutagenicity --- The toner, which is included in this developer has been tested on the Ames test.
The result is negative.

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. While there have been no studies to date using developer, a two-year cancer bioassay using a typical toner preparation containing carbon black (a small amount of toner is included in the developer mixture) demonstrated no association between toner exposure and tumor development in rats.

Signs and Symptoms of Exposure :

Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : None

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-30651

Section 5. Health Hazard Data (Continued)

Emergency and First Aid Procedures :

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: about 5
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used) : Not applicable
Ignition Temperature : > 350°C
Flammable Limits : (LEL); Not applicable (UEL); Not applicable
Extinguishing Media : CO₂, dry chemical, foam or water
Special Fire Fighting Procedure : None
Unusual Fire and Explosion Hazard : This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact : None
Sensitivity to Static Charge : None

Section 8. Reactivity Data

Stability : Stable
Incompatibility (Material to Avoid) : None
Hazardous Decomposition : CO and NO_x
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

S H A R P

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Date Revised: October 2, 1997

Date Issued : October 1, 1997

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-30741

Section 1. Product Identification

Product : *

SD-485ND/SD-485DV ("Lot No. A...." Black Developer)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Ferrite		> 95%	Not listed	Not listed	None
Zinc oxide	1314-13-2				
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Magnesium oxide	1309-48-4				
Styrene-Acrylate copolymer	25767-47-9	< 4%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 0.4%	3.5mg/m ₃	3.5mg/m ₃	None

Section 4. Hazardous Identification (Emergency Overview)

Developer is a black powder containing small amounts of toner, and possessing no immediate hazard. There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner.

Section 5. Health Hazard Data

Route(s) of Entry : Inhalation?

Yes

Skin?

No

Ingestion?

Possible but very unusual.

Health Hazards : Acute oral toxicity --- LDL_0 of the toner which is included in this developer is over 2,000mg/kg.
Mutagenicity --- The toner, which is included in this developer has been tested on the Ames test.
The result is negative.

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. While there have been no studies to date using developer, a two-year cancer bioassay using a typical toner preparation containing carbon black (a small amount of toner is included in the developer mixture) demonstrated no association between toner exposure and tumor development in rats.

Signs and Symptoms of Exposure :

Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : None

* The Developer Lot Number appears on the developer container.

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-30741

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

Boiling/Melting Point	: Not applicable	Specific Gravity	: about 5
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: Not applicable
Ignition Temperature	: > 350°C
Flammable Limits	: (LEL); Not applicable (UEL); Not applicable
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: None
Unusual Fire and Explosion Hazard	: This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: None
Hazardous Decomposition	: CO and NO _x
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

Date Revised: August 15, 1997

Date Issued : August 1, 1997

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-30751

Section 1. Product Identification**Product :**

SD-475MD/SD-475CD/SD-475LD (Black Developer)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Ferrite		> 94%	Not listed	Not listed	None
Zinc oxide	1314-13-2				
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Styrene-Acrylate copolymer	25767-47-9	< 5%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 0.4%	3.5mg/m ³	3.5mg/m ³	None

Section 4. Hazardous Identification (Emergency Overview)

Developer is a black powder containing small amounts of toner, and possessing no immediate hazard. There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner.

Section 5. Health Hazard DataRoute(s) of Entry : Inhalation?Skin?Ingestion?

Yes

No

Possible but very unusual.

Health Hazards : Acute oral toxicity --- LDL_0 of the toner which is included in this developer is over 2,000mg/kg.
Mutagenicity --- The toner, which is included in this developer has been tested on the Ames test.
The result is negative.

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. While there have been no studies to date using developer, a two-year cancer bioassay using a typical toner preparation containing carbon black (a small amount of toner is included in the developer mixture) demonstrated no association between toner exposure and tumor development in rats.

Signs and Symptoms of Exposure :

Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : None

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-30751

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: about 5
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used) : Not applicable
Ignition Temperature : > 350°C
Flammable Limits : (LEL); Not applicable (UEL); Not applicable
Extinguishing Media : CO₂, dry chemical, foam or water
Special Fire Fighting Procedure : None
Unusual Fire and Explosion Hazard : This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact : None
Sensitivity to Static Charge : None

Section 8. Reactivity Data

Stability : Stable
Incompatibility (Material to Avoid) : None
Hazardous Decomposition : CO and NO_x
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

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-3291

Section 1. Product Identification**Product :**

SD-275ND/SD-275DV (Black Developer)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Ferrite powder		< 97%	Not listed	Not listed	None
Zinc oxide	1314-13-2				
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Magnesium oxide	1309-48-4				
Polyester resin	NJ TSNR 80101252-5001P	< 4%	Not listed ₃	Not listed ₃	None
Carbon Black	1333-86-4	< 1%	3.5mg/m ₃	3.5mg/m ₃	None

Section 4. Hazardous Identification (Emergency Overview)

Developer is a black powder containing small amounts of toner and possessing no immediate hazard.

There are no anticipated carcinogenic effects from exposure based on animal tests performed using developer.

Section 5. Health Hazard Data**Route(s) of Entry :** Inhalation?

Yes

Skin?

No

Ingestion?

Possible but very unusual.

Health Hazards : Acute Toxicity: LD50 > 5,000mg/kg. LC50 > 6.42 mg/L'4Hrs

Mutagenicity (Ames Test): Negative. (S.typhimurium, Escherichia coli)

(Note: data is from testing of the included toner.)

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. While there have been no studies to date using developer, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Signs and Symptoms of Exposure : Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : None

S H A R P

Date Revised : October 1, 1997

Date Issued : October 20, 1993

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-3291

Section 5. Health Hazard Data (Continued)

Emergency and First Aid Procedures :

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: about 5
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: Not applicable
Ignition Temperature	: Not applicable
Flammable Limits	: (LEL); Not applicable (UEL); Not applicable
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: None
Unusual Fire and Explosion Hazard	: This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: Strong acids or alkalines
Hazardous Decomposition	: CO and NO _x
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

Date Revised: August 1, 1996

Date Issued : May 1, 1993

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-3401

Section 1. Product Identification**Product :**

SD-360V/SD-360ND (Black Developer)

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Ferrite		> 94%	Not listed	Not listed	None
Zinc oxide	1314-13-2				
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Styrene-Acrylate copolymer	25767-47-9	< 5%	Not listed ₃	Not listed ₃	None
Carbon black	1333-86-4	< 0.4%	3.5mg/m ³	3.5mg/m ³	None

Section 4. Hazardous Identification (Emergency Overview)

Developer is a black powder containing small amounts of toner, and possessing no immediate hazard. There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner.

Section 5. Health Hazard Data**Route(s) of Entry : Inhalation?**

Yes

Skin?

No

Ingestion?

Possible but very unusual.

Health Hazards : Acute oral toxicity --- LDL_0 of the toner which is included in this developer is over 2,000mg/kg.
Mutagenicity --- The toner, which is included in this developer has been tested on the Ames test.
The result is negative.

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. While there have been no studies to date using developer, a two-year cancer bioassay using a typical toner preparation containing carbon black (a small amount of toner is included in the developer mixture) demonstrated no association between toner exposure and tumor development in rats.

Signs and Symptoms of Exposure :

Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : None

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-3401

Section 5. Health Hazard Data (Continued)**Emergency and First Aid Procedures :**

Inhalation --- Remove to fresh air. If effects occur, consult medical personnel.
 Eye --- In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

BoilingMelting Point	: Not applicable	Specific Gravity	: about 5
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: Not applicable
Appearance	: Fine powder	Color	: Black
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: Not applicable
Ignition Temperature	: > 350°C
Flammable Limits	: (LEL); Not applicable (UEL); Not applicable
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: None
Unusual Fire and Explosion Hazard	: This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: None
Hazardous Decomposition	: CO and NO _x
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

S H A R P

Date Revised : September 5, 1997

Date Issued : December 26, 1996

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-80731

Section 1. Product Identification**Product :**

Silicone Oil for SF-77RL, SF-76AK, SF-710RL, SF-88RL, SF-90RL, SF-960RL, SF-80RL, SF-720RL, SF-750RL, SF-860CP1, SF-955CP1, SF-955KB, SF-810RL, SF-770RL, SF-970CP1, SF-880RU, SF-880RL, SF-730HR, SF-830RU, SF-940RU, CX-750NB, SD-360KA, SD-360UR, SF-360LR, SF-230KB, SF-230KA, SF-240KB

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

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>
Dimethyl polysiloxane	63148-62-9	100%	Not Listed	Not Listed	None

Section 4. Hazardous Identification (Emergency Overview)

This product does not contain a hazardous component.

Section 5. Health Hazard Data

<u>Route(s) of Entry</u> :	<u>Inhalation?</u>	<u>Skin?</u>	<u>Ingestion?</u>
	No	No	No

Health Hazards : Acute estimated LD₅₀ is over 5,000mg/kg.

<u>Carcinogenicity</u> :	<u>NTP?</u>	<u>IARC Monographs?</u>	<u>OSHA Regulated?</u>
	No	No	No

Signs and Symptoms of Exposure:

Eye contact: Transient weak irritation.
Skin contact: Almost a non-irritant.
Inhalation: Essentially non-toxic.

Medical Conditions Generally Aggravated by Exposure : No information available**Emergency and First Aid Procedures :**

Skin: Remove liquid from skin with a dry cloth or towel and wash exposed area with soap and water.
Eyes: In case of contact, immediately flush eyes with water for at least 15 minutes.

Date Revised: September 5, 1997

Date Issued : December 26, 1996

MATERIAL SAFETY DATA SHEET (2/2)

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Section 6. Physical Chemical Characteristics

Boiling/Melting Point	: Not applicable	Specific Gravity	: 0.97-0.98 (H ₂ O = 1)
Vapor Pressure	: Not applicable	Solubility in Water	: Negligible
Vapor Density	: Not applicable	PH	: Not applicable
Evaporation Rate	: Not applicable	Viscosity	: No data is available
Appearance	: Transparent fluid	Color	: Colorless
Odor	: Odorless		

Section 7. Fire and Explosion Data

Flash Point (Method Used)	: > 315 ^o C
Ignition Temperature	: No information is available.
Flammable Limits	: No information is available.
Extinguishing Media	: CO ₂ , dry chemical, foam or water
Special Fire Fighting Procedure	: Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals
Unusual Fire and Explosion Hazard	: None
Sensitivity to Mechanical Impact	: None
Sensitivity to Static Charge	: None

Section 8. Reactivity Data

Stability	: Stable
Incompatibility (Material to Avoid)	: None
Hazardous Decomposition	: SiO ₂ , CO ₂ , and traces of incompletely burned carbon products.
Hazardous Polymerization	: Will not occur.

Section 9. Precautions for Safe Handling and Use**Personal Protection Information (Respiratory, Eye Protection and Protective Glove):**

Safety glasses, rubber or [plastic film gloves, and eye wash equipment. Respiratory protection is not required under normal use

Engineering Control / Ventilation: Not required.

Work / Hygienic Practice: Wash hands thoroughly after handling.

Steps to be taken in case of Spill or Leak : Use absorbant material to collect and contain for salvage or disposal.

Waste Disposal Method : Waste material may be disposed of under conditions which meet all federal, state and local environmental regulations.

Section 10. Other Information

NFPA Rating (U.S.A.):	No information is available.
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.

This information relates only to the specific material designated as supplied by the manufacturer. This information is supplied to us by the manufacturer and Sharp offers no warranties as to its accuracy and accepts no responsibility for any typographical errors which may appear on these sheets. It is the responsibility of the user to determine the suitability of this product for each particular use

