

## MATERIAL SAFETY DATA SHEET

MSDS No. B-1006

**Section 1. Product Identification**Product Code: **FO-15CR, UX-15CR** Imaging Film**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: 201-529-8200 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information: 416-890-2100 Emergency telephone number : 1-800-424-9300
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
Polyethylene terephthalate	25038-59-9	51.0 %	-	-	-
Carbon black	1333-86-4	8.5 %	3.5mg/m <sup>3</sup>	3.5mg/m <sup>3</sup>	-
Ethylene-vinyl acetate copolymer	24937-78-8	3.1 %	-	-	-
Ester wax	8015-86-9	5.6 %	-	-	-
Paraffin wax	8002-74-2	12.5 %	-	2mg/m <sup>3</sup> (fume)	-
Microcrystalline wax	63231-60-7	15.2 %	-	-	-
Modified wax	8016-60-2	1.3 %	-	-	-
Polyester resin	27923-68-8	1.3 %	-	-	-
Others	-	1.5 %	-	-	-

**Section 4. Hazardous Identification (Emergency Overview)**

This product is ink film for thermal transfer facsimile. "Ink film" is a thin film coated with ink.  
It is no special hazard under normal use condition.

**Section 5. Health Hazard Data**

Route(s) of Entry:	Inhalation ?	Skin ?	Ingestion ?
	not applicable	not applicable	Possible but very unusual
Health Hazards:	The ingredients are not listed in ACGIH (1986) and OSHA (1989) except carbon black and paraffin wax		
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.		
Signs and Symptoms of Exposure:	not applicable		
Medical Conditions Generally Aggravated by Exposure:	not applicable		
Emergency and First Aid Procedures:	not applicable		

## MATERIAL SAFETY DATA SHEET

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### Section 6. Physical Chemical Characteristics

Boiling/Melting Point	m.p. about 70 °C for ink	Specific Gravity	about 1
Vapor Pressure	not applicable	Solubility	negligible (water)
Vapor Density	not applicable	PH	not applicable
Evaporation Rate	negligible	Viscosity	not applicable
Appearance	thin film coated with ink	Color	black
Odor	slight wax odor		

### Section 7. Fire and Explosion Data

Flash Point (Method Used):	about 250 °C for ink
Ignition Temperature:	not applicable
Flammable Limits:	not applicable (LEL); (UEL);
Extinguishing Media:	CO <sub>2</sub> , water, dry chemicals and form etc.
Special Fire Fighting Procedure:	none
Unusual Fire and Explosion Hazard:	none
Sensitivity to Mechanical Impact:	no hazardous effect by mechanical impact
Sensitivity to Static Charge:	not applicable

### Section 8. Reactivity Data

Stability:	Stable
Incompatibility (Materials to Avoid):	none
Hazardous Decomposition:	not applicable
Hazardous Polymerization:	not applicable

### Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):	not required
Engineering Control/Ventilation:	especially none
Work/Hygienic Practice:	especially none
Steps to be taken in case of Spill or Leak:	If rumple the product and wax layer peel off, sweep up or clean with vacuum cleaner. If it dirty skin, wash with water and soap. If it clothes, wash by suitable method.
Waste Disposal Method:	Dispose in an approved incinerator or contract with licensed chemical disposal agency. Ensure conformity with governmental disposal regulations. (Dispose by the same method of ordinary plastic products.)

### Section 10. Regulatory Information

NFPA Rating (U.S.A.):	no information
WHMIS Legislation (Canada):	not controlled
Transport Information:	no information
UN No.:	no information

### Section 11. Other information

Reference :	IARC (1996) 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
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Please check the bottom righthand corner of the product number UX-3CR on the film box, or the final digit of the manufacturing number on the label at the beginning of the roll of ink film. If an "F" appears, please read pages 147 to 148. If an "F" does not appear, please read pages 149 to 150.

# S H A R P

Revised date : \_\_\_\_\_

Issued date : DEC.2.1999

## MATERIAL SAFETY DATA SHEET (1/2)

MSDS No B-1021

### Section 1. Product Identification

**Product Code :** UX-3CR Imaging Film

### 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 Document Network System of America 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 : 1-800-424-9300
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
Carbon Black	1333-86-4	9%	3.5 mg/m <sup>3</sup>	3.5 mg/m <sup>3</sup>	-
Paraffin Wax (fume)	8002-74-2	23%	-	2.0 mg/m <sup>3</sup>	-
Polyethylene terephthalate	25038-59-9	50 - 55%	-	-	-
Ethylene-vinyl acetate copolymer	24937-78-8	1 - 5%	-	-	-
Ester wax	8015-86-9	1 - 5%	-	-	-
Polyester resin	27923-68-8	1 - 5%	-	-	-
Synthetic wax	68989-34-4	1 - 5%	-	-	-
Others	-	1 - 5%	-	-	-

### Section 4. Hazardous Identification (Emergency Overview)

This product is ink film for thermal transfer facsimile.

"Ink film" is a thin film coated with ink.

It is no special hazard under normal use condition.

### Section 5. Health Hazard Data

Route(s) of Entry :	Inhalation?	Skin?	Ingestion?
	Not applicable	Not applicable	Possible but very unusual

**Health Hazards :** The ingredients are not listed in ACGIH(1986) and OSHA(1989) except carbon black and paraffin wax.

**Carcinogenicity :** In 1996 the IARC reevaluated carbon black as a Groupe 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.

**Signs and Symptoms of Exposure :** no data available

**Medical Conditions Generally Aggravated by Exposure :** no data available

**Emergency and First Aid Procedures :**

SKIN-----Wash away ink on skin

EYE-----Wash away water and consult a doctor promptly.

INHALATION---Not applicable

OTHERS-----No data available

# S H A R P

## MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. B-1021

### Section 6. Physical Chemical Characteristics

<b>Boiling/Melting Point</b>	No data available	<b>Specific Gravity</b>	No data available
<b>Vapor Pressure</b>	No data available	<b>Solubility in Water</b>	Negligible
<b>Vapor Density</b>	No data available	<b>PH</b>	No data available
<b>Evaporation Rate</b>	No data available	<b>Viscosity</b>	No data available
<b>Appearance</b>	Thin film coated with ink	<b>Color</b>	Black
<b>Odor</b>	Slight wax odor		

### Section 7. Fire and Explosion Data

<b>Flash Point (Method Used)</b>	: >150°C for ink
<b>Ignition Temperature</b>	: No data available
<b>Flammable Limits</b>	: (LEL); No data available (UEL); No data available
<b>Extinguishing Media</b>	: Water mist, Foam, Dry powder, CO <sub>2</sub> gas, others
<b>Special Fire Fighting Procedure</b>	: No data available
<b>Unusual Fire and Explosion Hazard</b>	: None
<b>Sensitivity to Mechanical Impact</b>	: No hazardous effect by mechanical impact
<b>Sensitivity to Static Charge</b>	: Not applicable

### Section 8. Reactivity Data

<b>Stability</b>	: Stable
<b>Incompatibility (Materials to Avoid)</b>	: None
<b>Hazardous Decomposition</b>	: None
<b>Hazardous Polymerization</b>	: Will not occur

### Section 9. Precautions for Safe Handling and Use

<b>Personal Protection Information (Respiratory, Eye Protection and Protective Glove)</b>	: Hnad protection : Desirable in some cases
<b>Engineering Control / Ventilation</b>	: No data available
<b>Work / Hygienic Practice</b>	: None
<b>Steps to be taken in case of Spill or Leak</b>	: If inadvertently released, rewind ribbon.
<b>Waste Disposal Method</b>	: Disposal in accordance with local, state and federal regulations.

### Section 10. Regulatory Information

<b>NFPA Rating (U.S.A.)</b>	: No information
<b>WHMIS Legislation (Canada)</b>	: Not controlled
<b>Transport Information</b>	: No information
<b>UN No.</b>	: Not applicable

### Section 11. Other Information

References : IARC(1996) 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  
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# S H A R P

Date Revised: \_\_\_\_\_

Date Issued :Dec. 22, 1998

## MATERIAL SAFETY DATA SHEET (1/2)

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Ethylene-vinyl acetate copolymer	24937-78-8	3.1%	-	-	-
Ester wax	8015-86-9	5.6%	-	-	-
Paraffin Wax	8002-74-2	12.5%	-	2 mg/m <sup>3</sup> (fume)	-
Microcrystalline wax	63231-60-7	15.2%	-	-	-
Modified wax	8016-60-2	1.3%	-	-	-
Polyester resin	27923-68-8	1.3%	-	-	-
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### Section 5. Health Hazard Data

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**Health Hazards :** The ingredients are not listed in ACGIH(1986) and OSHA(1989) except carbon black and paraffin wax.

**Carcinogenicity :** In 1996 the IARC reevaluated carbon black as a Groupe 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.

**Signs and Symptoms of Exposure :** not applicable

**Medical Conditions Generally Aggravated by Exposure :** not applicable

**Emergency and First Aid Procedures :** not applicable

# S H A R P

Date Revised: \_\_\_\_\_

Date Issued : Dec. 22, 1998

## MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. B-1006

### Section 6. Physical Chemical Characteristics

<b>Boiling/Melting Point</b>	m.p. about 70 C for ink	<b>Specific Gravity</b>	about 1
<b>Vapor Pressure</b>	Not applicable	<b>Solubility in Water</b>	Negligible
<b>Vapor Density</b>	Not applicable	<b>PH</b>	Not applicable
<b>Evaporation Rate</b>	Negligible	<b>Viscosity</b>	Not applicable
<b>Appearance</b>	Thin film coated with ink	<b>Color</b>	Black
<b>Odor</b>	Slight wax odor		

### Section 7. Fire and Explosion Data

<b>Flash Point (Method Used)</b>	: about 250°C for ink
<b>Ignition Temperature</b>	: Not applicable
<b>Flammable Limits</b>	: (LEL): Not applicable(UEL): Not applicable
<b>Extinguishing Media</b>	: CO2, water , dry chemicals and form etc.
<b>Special Fire Fighting Procedure</b>	: None
<b>Unusual Fire and Explosion Hazard</b>	: None
<b>Sensitivity to Mechanical Impact</b>	: No hazardous effect by mechanical impact
<b>Sensitivity to Static Charge</b>	: Not applicable

### Section 8. Reactivity Data

<b>Stability</b>	: Stable
<b>Incompatibility (Material to Avoid)</b>	: None
<b>Hazardous Decomposition</b>	: Not applicable
<b>Hazardous Polymerization</b>	: Not applicable

### Section 9. Precautions for Safe Handling and Use

<b>Personal Protection Information (Respiratory, Eye Protection and Protective Glove)</b>	: Not required
<b>Engineering Control / Ventilation</b>	: Not required
<b>Work / Hygienic Practice</b>	: None
<b>Steps to be taken in case of Spill or Leak</b>	: If rumple the product and wax layer peel off, sweep up or clean with vacuum cleaner.
<b>Waste Disposal Method</b>	: If it dirty skin, wash with water and soap. If it clothes, wash by suitable method. Dispose in an approved incinerator or contract with licensed chemical disposal agency. Ensure conformity with governmental diaposal regulations. ( Dispose by the same method of ordinary plastic products.)

### Section 10. Regulatory Information

<b>NFPA Rating (U.S.A.)</b>	: No information
<b>WHMIS Legislation (Canada)</b>	: Not controlled
<b>Transport Information</b>	: No information
<b>UN No.</b>	: No information

### 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  
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