

**Material Safety Data Sheet**

May be used to comply with

OSHA's Hazard Communication Standard,

29 CFR 1910.1200. Standard must be

consulted for specific requirements.

**U.S. Department of Labor**

Occupational Safety and Health Administration

(Non-Mandatory Form)

Form Approved

OMB No. 1218-0072

IDENTITY (As Used on Label and List)  
**HF80F130144 RIBBON-30M F130-E401(DNP)30M**  
**HF80F130203 RIBBON-100 F130-E402(DNP)100M**

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Section I**

Manufacturer's Name  
 DAI NIPPON PRINTING CO., LTD.

Emergency Telephone Number  
 042-952-9666

Address:  
 591-2, Kamihirose, Higashikubo, Sayama,  
 Saitama, 350-1321  
 JAPAN

Telephone Number for information  
 042-952-9666

Date prepared September 6, 1999

Signature of Preparer (optional)

*Hideichiro Takeda*

Hideichiro Takeda / Mgr. of Technical Dept.

**Section II - Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	%(optional)
Polyethylene terephthalate film (CAS No. 25038-59-9)				( 45 - 54% )
Coating layer substances				
Carbon Black (CAS No. 1333-86-4)	3.5mg/m3	3.5mg/m3	None	( 7- 10% )
Ester Wax (CAS No. 8015-86-9)	-	-	None	( 4- 7% )
Paraffin Wax (CAS No. 8002-74-2)	-	2.0mg/m3	None	( 7- 14% )
Microcrystalline Wax (CAS No. 63231-60-7)	-	-	None	( 13- 20% )
Others	-	-	None	( 4- 11% )

**Section III - Physical/Chemical Characteristic**

Boiling Point	Not applicable	Specific Gravity (H2O=1)	About 1.2
Vapor Pressure (mm.Hg)	Not applicable	Melting Point	71°C
Vapor Density (AIR = 1)	Not applicable	Evaporation Rate (Butyl Acetate=1)	Negligible

Solubility in water  
 Negligible

Appearance and Odor  
 Ink is black solid with slight odor.

**Section IV - Fire and Explosion Hazard Data**

Flash point (Method Used) About 250°C for ink	Flammable Limits Not applicable	LEL Not applicable	UEL Not applicable
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Extinguishing Media  
 CO2, Water, Dry Chemicals, Foam

Special Fire Fighting Procedures  
 For large quantities (i.e. truckload or pallet) involved in a fire, firefighters should wear self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards  
 None

**Section V - Reactivity Data**

Stability	Unstable		Conditions to Avoid None
	Stable	<input type="radio"/>	

Incompatibility (Materials to Avoid)  
None

Hazardous Decomposition or Byproducts  
CO, CO2, NOX and H2O etc

Hazardous Polymerization	May Occur		Conditions to Avoid None
	Will Not Occur	<input type="radio"/>	

**Section VI - Health Hazard Data**

Route(s) of Entry:	Inhalation? No	Skin? No	Ingestion? possible but very unusua
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Health Hazards (Acute and Chronic)  
All the ingredients are negative mutagenic (Test species :S. typhimurium )

Cardiogenicity:	NTP? No	IARC Monographs? Carbon Black : Group 2B	OSHA Regulated? No
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Signs and Symptoms of Exposure  
None

Medical Conditions  
Generally Aggravated by Exposure      None

Emergency and First Aid Procedures  
Not applicable

**Section VII - Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled  
Rumpling the product may cause the wax layer to peel off. Sweep up or vacuum. When sweeping , avoid raising film or dust. If a vacuum is used , motor should be rated as dust tight. Wash any residue off skin with soap and water. Garments may be washed or dry cleaned after removal of loose film or dust.

Waste Disposal Method  
Dispose by the same method of ordinary plastic products in accordance with all applicable regulations. Any disposal practice must be in compliance with local, state and federal laws and regulations. If necessary, contact government office and ensure conformity with disposal regulations.

Precautions to Be Taken in Handling and Storing.  
No special precautions for safety reason.

Other Precautions  
None

**Section VIII - Control Measures**

Respiratory Protection (Specify Type)  
Not required

Ventilation	Local Exhaust No	Special No
	Mechanical (General) No	Other No

Protective Gloves Not required	Eye Protection Not required
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Other Protective Clothing or Equipment  
None

Work/Hygienic Practices  
None