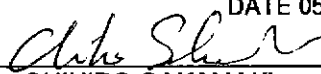


# Material Safety Data Sheet

DATE 05/29/2001

Signature



CHIHIRO SAKAMAKI

Official position

CHIEF MANAGER  
TECHNOLOGY AND DEVELOPMENTTOPPAN PRINTING CO., LTD.  
ADVANCED PRODUCT DIVISION.

## SECTION I

Product Name <b>CMYW Ribbon</b>	Chemical Name and Synonyms <b>Compound</b>
Emergency phones No. <b>+ 81 - 3 - 3835 - 5188</b>	

## SECTION II HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Hazardous Components		
INGREDIENTS		
CHEMICAL NAMES	CAS No.	%
Polyethylene Terephthalate	[25038-59-9]	95
Pigment	[ ————— ]	3~45
Carbon Black	[ ————— ]	5~15
Copper	[ ————— ]	1~15
Titanium	[13463-67-7]	30~40

## SECTION III PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point <b>N.A.</b>	Specific Gravity(water 1)
Vapor Pressure (mm Hg) <b>N.A.</b>	Softening Point <b>65°C</b>
Vapor Density (Air 1) <b>N.A.</b>	Evaporation Rate (Butyl Acetate 1) <b>N.A.</b>
Solubility in Water <b>Less than 0.1%</b>	
Appearance and Odor <b>Yellow/Magenta/Cyan/White/Black Film , Practically Odorless</b>	

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used) <b>N.A.</b>	Flammable Limits <b>N.A.</b>
Extinguish Media <b>Water , CO<sub>2</sub> , Form , Dry Chemical</b>	
Special Fire Fighting Procedures <b>None</b>	
Unusual Fire And Explosion Hazards <b>None</b>	

N.A.=Not Applicable

**SECTION V REACTIVITY DATA**

Stability	Unstable	Condition To Avoid
	Stable <input checked="" type="radio"/>	Stable under Normal Conditions
Incompatibility (Material To Avoid)		
None		
Hazardous Decomposition or Byproducts		
None in normal handling and use		
Hazardous Polymerization	May occur	Condition to avoid
	Will not occur <input checked="" type="radio"/>	

**SECTION VI HEALTH HAZARD DATA**

Primary routes of entry		
Inhalation <input type="checkbox"/> Skin <input type="checkbox"/> Other(Specify)		
Health Hazards(Acute and Chronic)		
No Data		
Carcinogenicity		
	Polyester Resin	Inadequate Evidence
	Pigment Resin	Inadequate Evidence
	Carbon Black	Inadequate Evidence
	Copper	Inadequate Evidence
Irritant:		
	Skin No	Eye No
		Inhalation No

**SECTION VII Precautions For Safe Handling And Use**

Steps to be taken in case materials released or spilled	N.A.
Waste Disposal Method	In accordance with local and federal regulation
Precautions to be taken in handling and storing	None
Other Precautions	Store in a Cool, Dry Place

**SECTION VIII CONTROL MEASURES**

Respiratory Protection (Specify Type)		Not Required
Ventilation	Local Exhaust	Special
	Not Required	Not Required
	Mechanical (General)	Other
	Not Required	Not Required
Protective Gloves	Not Required	Eye Protection
		Not Required
Other Protective Clothing Or Equipment		Not Required
Work/Hygienic Practices		Not Required

N.A.=Not Applicable