Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

IBM CORPORATION
NEW ORCHARD ROAD
ARMONK, NEW YORK 10504
U.S.A.

FOR EMERGENCY SOURCE INFORMATION
24 HOURS CONTACT 1-800-426-4333
INTERNATIONAL EMERGENCY NUMBER
1-303-739-1111

IBM Product Name 6400-i PREMIUM 30 RIBBON, 6400-i PREMIUM 20 RIBBON
IBM Infoprint 6500 Ribbon
Common Name Ink Ribbon
IBM Part Number 57P2308; 57P2309, 39U2551, 41U1792, 41U1793
IBM Material Reference Number 940115180
Recommended use Printer Ribbon

Creation Date 07-Apr-2005 **Revision Date** NOT AUTHORIZED

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %	CAS-No
Fatty acid	Proprietary	112-80-1
Carbon Black	Proprietary	1333-86-4
Violet dye	Proprietary	52080-58-7
Nigrosine Dye (CI solvent black 7)	Proprietary	8005-02-5
Lecithins, Complex combination of diglycerides of fatty acids linked to the choline ester of phosphoric acid.	Proprietary	8002-43-5
Tall Oil	Proprietary	65071-95-6
Amines, N-Tallow Alkyltrimethylenedioleates	Proprietary	61791-53-5

See Section 8 for Exposure Guidelines

3. HAZARDS IDENTIFICATION

Emergency Overview
No information available

Principle Routes of Exposure Ingestion.
Target Organ Effects No information available.

Potential health effects

Eyes irritant.
Skin irritant.
Inhalation Short Term Effects: Respiratory tract irritation may occur with exposure to large amounts of dust.
Long Term Effects: Potential risk of irreversible pulmonary effects.*
*Chronic exposure is not expected when this product is used as intended.

Ingestion Can cause diarrhea if significant quantities are ingested.

Irritantcy of Product Moderate.

Aggravated Medical Conditions	Prolonged or repeated contact may cause dermatitis.
Sensitization	No information available
Carcinogenic effects	Black powder with a slight odor. Carbon black has been classified as an IARC 2B carcinogen. May cause respiratory tract or skin irritation. May form flammable or explosive dust-air mixtures. Avoid chronic pulmonary exposures to dust. Avoid exposure to eyes, skin or clothing (will stain). Keep container closed. Use with adequate ventilation.

Carcinogen Status

OSHA: N
IARC: Y (Carbon Black, Group 2B)
NTP: N
ACGIH: N

4. FIRST AID MEASURES

Eye contact	Flush eye with water for 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Ingestion	Do not induce vomiting. Call a physician immediately.
Inhalation	Move to fresh air.
Notes to physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable properties	No information available
Suitable extinguishing media	Foam. dry chemical. Carbon dioxide (CO2). Alcohol Foam.
Unsuitable extinguishing media	No information available.
Hazardous combustion products	Carbon monoxide, carbon dioxide (CO2)
Specific hazards	No information available.
Special Fire Fighting Procedures	No information available
Special protective equipment for firefighters	No information available.

Flash point	> 360 °F	> 182 °C
Autoignition temperature	> 360 °F	> 182 °C

Explosion limits

Upper explosion limit	No data available
Lower explosion limit	No data available

NFPA **Health** 1 **Flammability** 1 **Reactivity** 0
HMIS
Other Information Sensitivity to Static Discharge: Very Low, Sensitivity to Mechanical Impact: Very Low

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No information available

Environmental precautions Either rewind ribbon onto the spool or collect loose ribbon. Dispose if contaminated.

Methods for cleaning up No information available.

See Section 8 for additional Personal Protective Equipment information

7. HANDLING AND STORAGE

Handling No information available.

Storage Do not store near open flame or sources of ignition. Do not store in high temperature storage. In case of fire, remove closed containers from areas exposed to fire.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Exposure limits

Carbon black:

3.5 mg/m^3	OSHA TWA PEL
3.5 mg/m^3	ACGIH TWA TLV - ACGIH A4 - Not classifiable as a human carcinogen
3.5 mg/m^3	NIOSH recommended 10 hour TWA
0.1 mg/m^3	NIOSH recommended 10 hour TWA (in the presence of polycyclic aromatic hydrocarbons)
Measurement Method	Particulate filter; gravimetric; (NIOSH III # 5000).

Control parameters No information available.

Engineering measures Provide adequate ventilation (ASHRAE 62).

Personal precautions No information available.

Personal protective equipment

Respiratory protection No respirator is required under normal conditions of use. Under conditions of frequent or heavy exposure, protection may be needed.

Hand protection Neoprene, Buna N, or Polyethylene if needed to prevent prolonged contact.

Eye protection If significant eye exposure is anticipated, the use of chemical splash goggles is recommended.

Emergency Eye Wash Where there is a potential for eye exposure to this substance, an eye wash fountain should be provided within the immediate work area for emergency use.

Skin and body protection Protective clothing is not required under normal conditions.

Hygiene measures No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Fabric ribbon, impregnated with ink
Odor Slight plastic odor
pH Not applicable
Vapour pressure <1 mbar @ 20 deg C Ink Vapor
Specific Gravity .96 Ink (H20=1)
Density No information available
Molecular Weight No information available
Softening point No information available
Water solubility Insoluble in water

Color Black
Odor Threshold Not applicable
Oxidizing properties No information available
Vapour density Heavier than Air Ink Vapor
Evaporation Rate Slower than n-Butyl Acetate (ink)
Viscosity No information available
Pressurized N
Solubility No information available
Partition coefficient (n-octanol/water) No information available

Flash point	> 360 °F	> 182 °C
Boiling point/range	> 400 °F	> 204 °C
Melting point/range	No data available	- °C
Autoignition temperature	> 360 °F	> 182 °C

10. STABILITY AND REACTIVITY

Stability Stable.

Conditions to avoid Avoid open flame, welding arcs or other high temperature sources, which induce thermal decomposition and fire.

Materials to avoid Strong acids, Bases, long term contact with water

Hazardous decomposition products Carbon monoxide. carbon dioxide (CO2).

Polymerization This product will not polymerize.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Component Information

LD50 Oral = LD50 Oral > 21.5 mg/kg
LD50 Dermal = No data available
LC50 Inhalation = No data available

Sensitization	No information available
Chronic toxicity	No information available
Subchronic toxicity	No information available

Specific effects

Carcinogenic effects	Carcinogen Status: Carbon black - IARC Group 2B.
Teratogenic effects	No information available
Mutagenic effects	No information available
Reproductive toxicity	No information available
Target Organ Effects	No information available.
Other adverse effects	No information available

Carcinogenic substances

Chemical Name	
Carbon Black	
Toxicity Data	Oral LD_{50} (rat) > 15,400 mg/kg; Dermal LD_{50} (rabbit) > 3,000 mg/kg (NIOSH RTECS #: FF5800000..
Carcinogenicity Status	In 1996 the International Agency for Research on Cancer (IARC) reevaluated carbon black as a Group 2B carcinogen based upon the development of lung tumors in rats receiving chronic inhalation exposures of free carbon black. The effects were observed only in rats exposed to high concentrations of carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats (i.e., mice, hamsters) have not demonstrated an association between carbon black and lung tumors. In contrast to the IARC assessment, neither the Occupational Safety and Health Administration (OSHA) nor the American Conference of Governmental Industrial Hygienists (ACGIH) has listed carbon black as a carcinogen. Epidemiology studies of workers in the carbon black producing industries of North America and Western Europe do not demonstrate an association between carbon black and cancer, even in high exposure occupational settings. In addition, in its reevaluation of carbon black, IARC concluded that "there is *inadequate evidence* in humans for the carcinogenicity of carbon black". Chronic overexposure to many dusts, including carbon black dust, may result in respiratory tract irritation and slight changes in pulmonary function. Collectively, the available data from animal and human epidemiology studies suggest that carbon black, as contained in this product, does not present a cancer risk to the end user if the handling and personal protective measures contained within this MSDS are understood and followed.
Local Effects	Irritant - inhalation, skin.
Target Effects	Toxic overexposure may affect the respiratory system, skin and mucous membranes.
At Increased Risk From Exposure	Persons with certain pre-existing upper respiratory disorders, such as bronchitis or asthma.

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Ecotoxicity effects No information available.
Mobility No information available.
Persistence and degradability Ink will degrade.
Bioaccumulation No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products Observe all federal, regional and local regulations when disposing of this substance. Contact local waste vendors for proper disposal.

Contaminated packaging No information available.

US EPA Waste Number No data available

14. TRANSPORT INFORMATION

Comment Do not freeze

DOT
Description Not regulated

TDG
Description Not regulated

MEX
Description Not regulated

ICAO
Description Not regulated

IMDG/IMO
Description Not regulated

IATA
Description Not regulated

ADN
Description Not regulated

ADR
Description Not regulated

RID
Description Not regulated

15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists: U.S.A. (TSCA), Korea (ECL), Japan (ENCS), China (IECSC), Canada (DSL/NDSL), Australia (AICS), Philippines (PICCS).

Comment The product is an article in EU

Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following HAPs:

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No data available
Chronic Health Hazard	No data available
Fire Hazard	No data available
Sudden Release of Pressure Hazard	No data available
Reactive Hazard	No data available

State Regulations

Chemical Name	Massachusetts - RTK	New Jersey - RTK	Pennsylvania - RTK	Rhode Island - RTK
Fatty acid	Not Listed	Not Listed	X	X
Carbon Black	X	X	X	X
Violet dye	Not Listed	Not Listed	Not Listed	
Nigrosine Dye (CI solvent black 7)	Not Listed	Not Listed	Not Listed	
Lecithins, Complex combination of diglycerides of fatty acids linked to the choline ester of phosphoric acid.	Not Listed	Not Listed	Not Listed	
Tall Oil	Not Listed	Not Listed	Not Listed	
Amines, N-Tallow Alkyltrimethylenedioleates	Not Listed	Not Listed	Not Listed	

California Proposition 65
The Proposition 65 listing of carbon black as a chemical known to the State of California to cause cancer only pertains to "airborne, unbound carbon black particles of respirable size". According to the Office of Environmental Health Hazard Assessment (OEHHA) of the California Environmental Protection Agency, "Exposure to carbon black, per se, does not occur when it is bound within a product matrix, such as rubber, ink or paint."

Carbon Black, CAS 1333-86-4
Category Carcinogenic.

WHMIS hazard class:
Non-controlled

16. OTHER INFORMATION

Additional advice No information available

Prepared By IBM Printing Systems Division
Preparer's Address Boulder, Colorado, USA

IBM is a registered trademark of IBM Corporation

The information provided on this MSDS is correct to the best of IBM's knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty, either express or implied, regarding the accuracy of the data or information contained herein. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS