

**Black Ribbon Cartridge****PN: 1053685, 57P1743, 41U2235**

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**CHEMICAL PRODUCT NAME:** 4247 Printer Ribbon Cartridge

IBM Field Use Number: None

IBM Material Reference Number: 940075030

TRADE NAMES/SYNONYMS: None**CHEMICAL FAMILY:** Not applicable**PRODUCT USE:** Black Ribbon Cartridge
for use in 4247 Printers**IBM Corporation**
New Orchard Road
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U.S.A.**INTERNATIONAL EMERGENCY NUMBER** 1-303-739-1111**24-Hour Emergency Source Information:** 1-800-426-4333**In U.S.A. Call:** 1-800-IBM-4333**In Canada Call:** 1-800-IBM-4YOU.**DISTRIBUTED BY:****PFS****Corporate Headquarters***Call Center and Technology Center*
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CHEMICAL MANUFACTURER:

Description	Part Number
4247 Printer, Black Ribbon Cartridge-version 003	1053685
4247 Printer, Black Ribbon Cartridge-version V03	57P1743
4247 Printer, Black Ribbon Cartridge-version L03	41U2235

Creation Date: 2000-Dec-19
Revision Date: 2007-Apr-30

Section 2 - Hazards Identification

The following information is based on testing of the product as a whole and/or characteristics of components.

Emergency Overview: 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.

Hazard Classification: No hazard expected under normal conditions of use

Routes of Entry and Potential Health Effects:

Inhalation: Short Term Effects: Inhalation is unlikely to occur. 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.

Skin Contact: Generally does not irritate the skin but in rare cases may cause skin irritation.

Eye Contact: May cause irritation.

Ingestion: Health Effects not known. Seek medical advice.

Carcinogen Status:

IARC:	Y (Carbon Black)
NTP:	N
OSHA:	N
ACGIH:	N

Section 3 – Composition, Information on Ingredients

Component	Percent (total wt.)	CAS Number	EINECS/ELINCS Number
	Classification	Symbol Letters	Risk Phrases
Oleic acid	10-15	112-80-1	204-007-1
	None	None	None
Solvent Black 7	1-5	68389-53-7	2698976
	None	None	None
Solvent Blue 4	<2.5	6786-83-0	2298518
	Harmful, Dangerous for the environment	Xn, N	R22, R43, R50/53, R51/53
Solvent Violet 8	<2.5	52080-58-7	None
	None	None	None
Solvent Orange 3	<2.5	495-54-5	2078037
	Harmful, Dangerous for the environment	Xn, N	R22, R36, R68, R51/53
Pigment Black 1	1-5	75578-75-5	None
	Toxic, Dangerous for the environment	T, N	R49, R43, R50/53
Carbon Black	1-5	1333-86-4	2156099
	None	None	None
Dispersing Agent	<2.5	164383-18-0	None
	Irritant	Xi	R36/38
White Oil	1-5	8042-47-5	2324558
	None	None	None
Fungicide	<2.5	98726-06-8	None
	None	None	None
Triglyceride Oil	1-5	122-32-7	2045347
	None	None	None
Antioxidant	<2.5	64742-82-1	2651854
	None	None	R45, R65
Total	100 Percent of Chemicals in Product		

Additional information: For wording of the listed risk and safety phrases refer to section 16

Section 4 - First Aid Measures

Inhalation:	Inhalation is unlikely to occur.
Skin Contact:	Wash affected area with plenty of soap and water.
Eye Contact:	Immediately wash eyes with plenty of water.
Ingestion:	Health Effects not known. Seek medical advice.
Other Information:	When in doubt or symptoms persist, seek medical attention.

Section 5 – Fire Fighting Measures

Flash Point/Range (°C):	Not determined
Autoignition Temperature (°C):	Not Applicable
Flammable Limits in Air UEL:	Not determined
Flammable Limits in Air LEL:	Not determined
Suitable Extinguishing Media:	In case of fire use water, foam, carbon dioxide or dry agent (S43)
NOT Suitable Extinguishing Media:	Do not use water jets
Hazardous Combustion Products:	Toxic and irritant fumes may be formed
Special Exposure Hazards:	
Special Protective Equipment:	
Other:	Not flammable but will support combustion

Section 6 - Accidental Release Measures

Personal Precautions:	Not required.
Environmental Precautions:	Dispose contaminated material as waste according to Section 13.
Small Spill and Leak	Sweep or shovel-up spillage and remove to a safe place. Place in appropriate container. Wash spill site with water and detergent.
Large Spill and Leak	Dispose contaminated material as waste according to Section 13.

Section 7 - Handling and Storage

Safe Handling:	No Special Requirements
Safe Storage:	Keep in a cool dry place

Section 8 - Exposure Controls / Personal Protection

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).

European Union and Member State Occupational Exposure Limit Values:

Measurement Method:

Biological Limit Values: Not available

Recommended Monitoring Procedures: Not available

Occupational Exposure Controls

Engineering Controls: Use good personal hygiene practices

Ventilation:

Respiratory Protection:

Eye Protection:

Emergency Eye Wash:

Protective Clothing:

Protective Gloves: Wear Plastic Gloves

Other Protective Equipment: None

Environmental Exposure Controls:

Section 9 - Physical and Chemical Properties

Physical State:	Solid printer Ribbon	Melting Point/Range (°C):	Not applicable
Colour:	Black	Boiling Point/Range (°C):	Not applicable
Odour:	Not determined	Freezing Point/Range (°C):	Not applicable
Pressurized (Yes/No):	No	Evaporation Rate:	Not determined
Specific Gravity:	Not determined	pH:	Not relevant
Solubility in Water:	No Data	% Volatiles (by weight):	Not determined
Solubility in Other:	No Data	Vapour Density (Air=1):	Not applicable
Explosive Properties:	Not determined	Vapour Pressure:	Not applicable
Oxidizing Properties:	Not determined	Relative Density:	Not determined
Viscosity:	Not applicable	Flammability (solid,gas)	Not determined
Partition Coefficient (n-octanol/water):	Not applicable	Flash Point (°C) (Closed Cup or Open Cup):	Not determined

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal conditions
Hazardous Polymerization: No Hazardous reactions known if used for its intended purpose
Conditions to Avoid:
Incompatibilities with Other Materials:
Hazardous Decomposition Byproducts:

Section 11 - Toxicological Information

Routes of Entry and Potential Health Effects:

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.

Skin Contact: Generally does not irritate the skin but in rare cases may cause skin irritation.

Eye Contact: May cause irritation.

Ingestion: Ingestion in not applicable route of entry for intended use. Health Effects not known.

PRODUCT DATA (Total Ribbon Composition including Carbon Black)

Chronic Toxicity: No data available.
Acute Toxicity: See Toxicity Data Table below.
Repeated Dose Toxicity: No data available.
Reproductive Toxicity: No data available.
Sensitization to Product: No data available.
Irritancy of Product: Generally does not irritate the skin but in rare cases may cause skin irritation. May irritate the upper respiratory tract.

Carcinogenicity: No data available.
Mutagenicity: No data available.
Teratogenicity: No data available.
Toxicologically Synergistic Products: No data available.
Toxicokinetics, Metabolism, and Distribution: No data available.

Toxicity Data: 6786-83-0 Solvent Blue
LD₅₀ (rat, oral): 490-670 mg/kg
532-82-1 Solvent Orange 3
LD₅₀ (rat, oral): ca 1650 mg/kg

CARBON BLACK (Alone)

Chronic Toxicity:

Acute Toxicity:

Repeated Dose Toxicity:

Toxic overexposure may affect the respiratory system, skin, and mucous membranes.

Reproductive Toxicity:

No data available.

Sensitization to Product:

No data available.

Irritancy of Product:

Predicted to be mildly irritating to the skin and upper respiratory tract.

Carcinogenicity:

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) nor the National Toxicology Program (NTP) 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.

Mutagenicity:

No data available.

Teratogenicity:

No data available.

Toxicologically Synergistic Products:

No data available.

Toxicokinetics, Metabolism, and

No data available.

Distribution:

At Increased Risk From Exposure:

No data available.

Toxicity Data:

LD₅₀ (rat, oral): 15,400 mg/kg

LD₅₀ (rabbit, skin): 3,000 mg/kg (NIOSH RTECS #: FF5800000)

LC₅₀ (rat, inhalation): Not available.

Section 12 - Ecological Information

Concentrations in final product presents little or no hazard to the environment.

Ecotoxicity:

Aquatic toxicity: Water Hazard Class not determined

Mobility:

Persistence and Degradability:

Bioaccumulative Potential:

**Persistence, Bioaccumulative,
and Toxicity Assessment**

Results:

Other Adverse Effects

Ozone Depletion Potential:

Photochemical Ozone

Creative Potential:

Endocrine Disruption

Potential:

Global Warming Potential:

Section 13 - Disposal Considerations

Waste Disposal: Dispose of product in compliance with local, state, or national legislation

Appropriate Disposal Method: Do not discharge into drains or the environment; dispose to an authorized waste collection point.

Waste Management Measures: Incineration by an approved method should be considered.

Section 14 - Transport Information

Special Precautions: Not classified as hazardous for transport.

UN Number:

ICAO Number:

ICAO/IATA Classification:

ICAO Subrisks:

ICAO Packaging Group:

ICAO Labels:

Proper Shipping Name:

ADR/RID Class:

ADR/RID Item:

ADR/RID Labels:

Hazard Code:

IMO Class:

IMDG Page:

IMO Subrisks:

IMO Packaging Group:

Section 15 - Regulatory Information

NFPA Rating: Health: 0 Flammability: 1 Reactivity: 0

HMIS Classification: Health: 0 Flammability: 1 Reactivity: 0

Not classified as hazardous for users.

Chemical Safety Assessment

Availability:

The following Label Information has been determined by the supplier based on the supplier's knowledge of the actual amounts of each component in this product:

Label Information

Danger Symbol: None assigned

Risk Phrases: None assigned

Safety Phrases: None assigned

This product conforms to all known European chemical safety legislation.

TSCA (USA):

OSHA (USA):

SARA / EPCRA (USA):

California Proposition 65:

EINECS (Europe):

CERCLA (USA):

Section 16 - Other Information

Reason for revision: MSDS updated with latest information

Additional advice: None

Note: The following Symbols, R Phrases, and S Phrases are for specific component ingredients in much larger quantities than in this product. An example of this would be a single component or a mixture of components in a bottled container or a vat of ink. The supplier, based on the supplier's knowledge of the actual amounts of each component and how it is bound in the final product, has determined that none of these need to be assigned to the final product:

Symbols

Xn Harmful
Xi Irritant
N Dangerous for the environment
T Toxic

R Phrases

22 Harmful if swallowed
36 Irritating to eyes
36/38 Irritating to eyes and skin
43 May cause sensitization by skin contact
45 May cause cancer
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
65 Harmful: May cause lung damage if swallowed
68 Possible risk of irreversible effects

S Phrases

2 Keep out of the reach of children
13 Keep away from food, drink and animal feeding stuffs.
23 Do not breath gas/fumes/vapour/spray
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
36/37 Wear suitable protective clothing and gloves
45 In case of accident or if you feel unwell seek medical advice immediately
46 If swallowed, seek medical advice immediately and show this container or label
53 Avoid exposure – obtain special instructions before use
60 This material and its container must be disposed of as hazardous waste
61 Avoid release to the environment. Refer to special instructions/safety data sheet.

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*****END OF MSDS*****