



**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**  
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**INTERNATIONAL EMERGENCY NUMBER** 1-303-739-1111

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**CHEMICAL MANUFACTURER:**

<b>Description</b>	<b>Part Number</b>
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

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**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:**

<b>IARC:</b>	Y (Carbon Black)
<b>NTP:</b>	N
<b>OSHA:</b>	N
<b>ACGIH:</b>	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

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## **Section 4 - First Aid Measures**

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

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## **Section 5 – Fire Fighting Measures**

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

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## **Section 6 - Accidental Release Measures**

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

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## **Section 7 - Handling and Storage**

<b>Safe Handling:</b>	No Special Requirements
<b>Safe Storage:</b>	Keep in a cool dry place

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## **Section 8 - Exposure Controls / Personal Protection**

### **Exposure Limits Carbon Black**

3.5 mg/m <sup>3</sup>	OSHA TWA PEL
3.5 mg/m <sup>3</sup>	ACGIH TWA TLV - ACGIH A4 - Not classifiable as a human carcinogen
3.5 mg/m <sup>3</sup>	NIOSH recommended 10 hour TWA
0.1 mg/m <sup>3</sup>	NIOSH recommended 10 hour TWA (in the presence of polycyclic aromatic hydrocarbons)
<b>Measurement Method:</b>	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:**

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## **Section 9 - Physical and Chemical Properties**

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

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## **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:**

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## **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  
LD<sub>50</sub> (rat, oral): 490-670 mg/kg  
532-82-1 Solvent Orange 3  
LD<sub>50</sub> (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 Distribution:**

No data available.

**Distribution:**

**At Increased Risk From Exposure:**

No data available.

**Toxicity Data:**

LD<sub>50</sub> (rat, oral): 15,400 mg/kg

LD<sub>50</sub> (rabbit, skin): 3,000 mg/kg (NIOSH RTECS #: FF5800000)

LC<sub>50</sub> (rat, inhalation): Not available.

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## **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:**

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## **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.

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## **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:**



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## **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):**

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## **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.

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

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