



Material Safety Data Sheet

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1. PRODUCT AND COMPANY IDENTIFICATION

Manufacturer Dell Computer Corporation
One Dell Way
Round Rock, TX 78682

Information 1-800-W W W-DELL

Emergency 1-800-551-8553

Product Name:

Dell Laser Printer 3000cn Toner Cartridge (Black)
K4971

2. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Nature:

Chemical Name	Ingredients (% by wt.)	CAS Registry Number
Styrene/acrylate copolymer	60 – 70	
Mn-Mg-Sr ferrite powder	10 – 20	
Polyethylene	1 – 10	
Amorphous silica	1 – 10	
Carbon black	1 – 10	1333-86-4

UN Hazard Class : None

UN Number : None

3. HAZARDOUS IDENTIFICATION

Physical and Chemical Hazard: There are no significant hazards associated with this product.

Adverse Human Health Effects: There are no significant hazards associated with this product.

Environmental Effects: There are no significant hazards associated with this product.

4. FIRST-AID MEASURES

Eye contact : Flush with a large amount of water for at least 15 minutes. Seek medical advice.

Skin contact : Wash with soap and water.

Inhalation : Remove from exposure and provide fresh air. Rinse mouth with water.

Ingestion : Rinse mouth with water. Give several glasses of water to drink and seek medical advice.

5.FIRE-FIGHTING MEASURES

Specified method : In case of fire use extinguishing media.
When in a machine, treat as an electrical fire.

Extinguishing media : Water spray, Foam, Dry chemicals

6.ACCIDENTAL RELEASE MEASURES

Shut off ignition sources. For small spills, sweep up or soak up with damp cloth.
For large spills, wear proper protective equipment and collect them in closed container.
Dispose off in accordance with national and local regulations.

7.HANDLING AND STORAGE

Handling : Do not incinerate toner or a toner cartridge. Do not disassemble a cartridge.

Storage : Keep in cool, dry and well-ventilated area. Keep out of reach of children.

8.EXPOSURE CONTROL /PERSONAL PROTECTION

Control Parameter

ACGIH TLV (2008) : 10 mg/m³ (Total)
3 mg/m³ (Respirable)

Precautionary Measures : None required when used as intended in Dell equipment.
For use other than normal customer operating procedures(such as in bulk toner processing facilities), local exhaust ventilation may be required.

Personal Protective Equipment: None required when used as intended in Dell equipment.
For use other than normal customer operating procedures(such as in bulk toner processing facilities), protective glove, goggles and respirators may be required.

9.PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor:	Blue Powder / Faint Odor	Vapour Pressure:	Not applicable
Boiling Point(OC):	Not applicable	Softening Point:	Not available
Volatile (%):	Not applicable	Initial Boiling Point:	Not applicable
Specific Gravity(H ₂ O=1):	Not available	Other Data:	None
Solubility in water:	Negligible		

10.STABILITY AND REACTIVITY

Flash Point(OC)	:Not applicable	Auto-Ignition Temperature:	Not applicable
Explosion Limit	:Not applicable		
Flammability	:Not flammable under conditions of use		
Spontaneous Combustibility / Reactivity with water	:None		
Self-reactivity / Explosive	:None		
Dust Explosive	: Like most organic materials in powder form, it can form explosive mixtures when dispersed in air.		
Stability and Reactivity	:Stable		
Other Data	:None		

11. TOXICOLOGICAL INFORMATION

Skin Corrosive	: None	
Skin Irritant (rabbit)	: Not an irritant ¹⁾	Eye Irritant (rabbit): Not an irritant ¹⁾
Human Patch	: Not available	
Sensitization	: Skin (guinea-pig)	: Not a sensitizer ¹⁾
Acute Toxicity	Swallowed LD50 (rat)	: > 5000 mg/kg ¹⁾ (practically non-toxic)
	Skin LD50 (rabbit)	: > 5000mg/ kg ¹⁾ (practically non-toxic)
	Inhaled LC50 (rat)	: > 4.1mg/L/4hr ¹⁾ (practically non-toxic)

Chronic Toxicity : The results obtained from a supplier sponsored, Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16 mg/m³) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available supplier toner, and would not be functionally suitable for Dell equipment.¹⁾

Carcinogenicity : Carbon Black is classified as "Group 2B(possibly carcinogenic to humans)" by IARC. But we obtained the results from a Chronic Toner Inhalation Study, that commercially available supplier toner has no evidence of human carcinogens. All other ingredients are not classified as "Carcinogens^{ref.1)}".

Mutagenicity: Ames Assay: Negative¹⁾

Reproduction and Development: Not classified as "Reproductive and Development chemicals^{ref.2)}".

1) This information is based on toxicity data for similar materials and ingredients.

12. ECOLOGICAL INFORMATION

Biodegradability	: Not available.	
Bioaccumulation	: Not available.	
Acute Toxicity	96hr LC 50 : > 500mg/L ¹⁾	(practically non-toxic)
	48hr EC50(Daphnia magna): >100mg/L ¹⁾	(practically non toxic)
Other Information	: None	

1) This information is based on toxicity data for similar materials and ingredients.

13. DISPOSAL CONSIDERATION

Dispose off in accordance with national and local regulations.

14. TRANSPORT INFORMATION

Transport in accordance with national, and local regulations.

15. REGULATORY INFORMATION

Ensure this product in compliance with national requirements and ensure conformity to local regulations.

16. OTHER INFORMATION

The above mentioned data correspond to our present state of knowledge and experience, but no warranty is made. Users should consider these data only as a supplement to other information and must make independent determination of the suitability and completeness of information from all sources to ensure proper use and disposal of the materials and safety and health of employees and customers.

References

- 1: IARC Monographs on the Evaluation Carcinogenic Risks to Humans (WHO.International Agency for Research on Cancer)
National Toxicology Program(NTP) Report on Carcinogens (NTP)
TLVs and BEIs (American Conference of Governmental Industrial Hygienists)
Council Directive 67/548/EEC on the approximation of the laws, regulations, and administratives provisions relating to the classification, packing and labelling of dangerous substances; Annex 1 (EU)
Journal of Occupational Health(Japan Society for Occupational Health)
- 2: Council Directive 67/548/EEC on the approximation of the laws, regulations, and administratives provision s relating to the classification, packing and labelling of dangerous substaces; Annex 1 (EU)