

Product Name

Issue Date: July 20, 1999

TN-6300 Toner / TN-6600 Toner

MSDS No.: ZLTE002

1. Identification of substance / preparation and of the company / undertaking**1.1 Product details**

Product name: TN-6300 Toner and TN-6600 Toner

Material name: ZEOGLOBULE PT401

These products are black toner in a cartridge for Brother industries Ltd. laser printers and fax receivers. The cartridge prevents the toner from spilling in normal use.

1.2 Company details

Manufacture / supplier:

Brother Industries, Ltd.

Printer Products Division

1-1-1, Kawagishi, Mizuho-ku, Nagoya 467-8562, Japan

Telephone No.: +81-52-824-2771

2. Composition / information on ingredients**2.1 Chemical characterization**

Chemical name: Styrene-acrylate Toner (Mixture)

CAS number: See 2.2 for ingredients.

Identification No.: Not applicable

2.2 Chemical characterization (Preparation)

Description: Mixture of styrene acrylate copolymer, carbon black and silicone dioxides

| Ingredients: | Name | CAS Number | %Wt |
|--------------|------------------------------|------------|-----|
| | Styrene-acrylate copolymer | 25767-47-9 | - |
| | Carbon black | 1333-86-4 | 5-7 |
| | Paraffin wax | 8002-74-2 | 1-5 |
| | Silicon dioxides (Amorphous) | 7631-86-9 | - |

3. Hazards identification

3.1 Special hazard information: R-phrase: Not required

4. First aid measures**4.1 General information**

Eye contact: Flush eyes with plenty of water for a minimum of 15 minutes, and seek medical attention.

Skin contact: Wash material off of skin with plenty of soap and water.

Ingestion: If the material is swallowed, get immediate medical attention or advice.

Inhalation: Remove person to fresh air and seek medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

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Water, ABC dry chemical or protein type air foams are recommended.

6. Accidental release measures**6.1 Personal precautionary measures**

Toner spill does not occur in normal use of the printer/fax receiver and in normal handling of the cartridge. In case of accidental spill, avoid dust inhalation, ingestion and contact. Review "Exposure controls / personal protection (Section 8)".

6.2 Environmental protection measure

Will not cause any serious environmental influence.

6.3 Clean up measure

Ventilate the room and collect toner spill as much as possible for disposal. Sprinkle water over the spilled and/or leaked materials and then clean up into a container.

In case of a small quantity of spill, a vacuum cleaner with safety features to prevent dust-explosion and with a bag that will contain very small size of particles (8 – 9 μ m) can be used.

6.4 Additional information

None

7. Handling and storage**7.1 Handling**

Safety data: The toner material is generally non-hazardous when it is NOT a toner dust floating in the air. The cartridge is designed to prevent toner spillage.

In case that some accident causes considerable spillage, refer to Section 8 for personal protective measures.

Fire and explosion hazard data: In case of considerable spill, control airborne concentrations below the lower limit and keep out of ignition source. (Explosion limits: Lower=40g/m³, Upper = unknown) Thermal decomposition of organic components may result in occurrence of oxides of carbon.

7.2 Storage

Storage details: Store in dry cool place. Keep away from sparks and open flame. Use with adequate ventilation.

Storage classification: Not applicable

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8. Exposure controls / personal protection**8.1 Personal safety**

No personal protective device is required under normal use. In case that some accident causes considerable spill, the following measures are recommended.

Breathing protection: Use respirator.
Hand protection: Use protective gloves.
Eye protection: Use safety goggles.
Body protection: Not necessary especially.

9. Physical and chemical properties**9.1 Appearance**

Physical state: Solid, fine granule Color: Black
Odor: Odorless

9.2 Relevant safety data

| | | | |
|---------------------|---------------------------|------------------|----------------------|
| Change of state: | Not applicable | Solubility: | Negligible in water. |
| Melting Point/area: | 110°C | pH-value: | Not applicable |
| Boiling Point/area: | Not applicable | Viscosity: | Not applicable |
| Flash point: | Not available | Solvent content: | Not applicable |
| Specific gravity: | 1.15 (H ₂ O=1) | Particle size: | 8 - 9 μm |

9.3 Additional information

None

10. Stability and reactivity

10.1 Storage conditions to avoid: Do not expose to temperature above 200°C.
10.2 Products to avoid: Strong oxidizers
10.3 Dangerous decomposition products: Carbon Oxide
10.4 Additional information: None

11. Toxicological information

11.1 Classification of LD₅₀ value: ≥ 2000 mg/kg
11.2 Primary irritation: Eye: Minimal irritant Dermal: Non-irritant
11.3 Carcinogenicity: Carbon black has been classified as a group 2B by IARC, however inhalation test using a typical toner containing carbon black has not demonstrated an association between toner exposure and animal tumors.
11.4 Mutagenicity: Negative in Ames test.

12. Ecological information

Not available.

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13. Disposal

13.1 Recommended Method of disposal: Landfill or incinerate little by little in accordance with federal, state and local regulations.

13.2 Disposal code number: Not applicable

14. Transport

14.1 General comment: No specific precautionary transport measures.

15. Regulatory information

15.1 In accordance with EC regulations

Classification, packaging and labeling description: Not required

R-phrases: Not required

S-phrases: Not required

15.2 In accordance with national regulations

Water hazard class: Not applicable

Additional information: None

16. Other information

16.1 Change of the material safety data sheet

Reason for change: Minor modifications to be easy to read

Date of change: July 20, 1999 (First edition: June 10, 1999)

16.2 Others

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This document covers only normal conditions of use and handling. When using product under unintended conditions, user is responsible to examine proper precautions for any particular use.

End of MSDS No.: ZLTE002