

MSDS No.: TN-12BK (TN128-00MO)

Date

Revision : 2003/08/21

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Manufacturer:**

Brother Industries, Ltd.  
 Information & Document Company  
 1-1-1, Kawagishi, Mizuho-ku, Nagoya 467-8562, Japan  
 Telephone (for information): +81-52-824-2545

**Importer in USA:**

Brother International Corporation  
 100 Somerset Corporate Boulevard, P.O. Box 6911  
 Bridgewater, NJ 08807-0911, USA  
 Telephone (for information): 800-284-4329

**Importer in Canada:**

Brother International Corporation (Canada) Ltd.  
 1 Hotel De Ville, Dollard des Ormeaux, Quebec,  
 H9B 3H6, Canada  
 Telephone (for information): 514-685-0600

**Importer in Europe:**

Brother International Europe Ltd.  
 Brother House, 1 Tame Street, Guide Bridge, Audenshaw,  
 Manchester M34 5JE, UK  
 Telephone (for information): +44-161-330-6531

**Importer in Australia:**

Brother International (Aust.) Pty. Ltd. ACN 001 393 835  
 7 Khartoum Road, North Ryde, N.S.W. 2113, Australia  
 Telephone (for information): 02-9887-4344

We do not provide 24 hour cover for information contact.

Please telephone to the above office appropriate to you during our business hours.

**Product name:**
**TN-12BK Toner**

This product is black toner in a cartridge for Brother industries Ltd. laser printers. The cartridge prevents the toner from spilling in normal use.

## 2. COMPOSITION, INFORMATION ON INGREDIENTS

**Chemical Nature:**

Chemical Name	Ingredients (% by wt.)	CAS Registry Number
Polyester	80-90	—
Carbon black	< 5	1333-86-4
Paraffin waxes	< 5	—
Vegetable wax	< 5	—
Amorphous silica	< 5	—

UN Hazard Class : None

UN Number : None

## 3. HAZARDOUS IDENTIFICATION

Physical and Chemical Hazard: None

Adverse Human Health Effects: None

Environmental Effects: None

## 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

- Specific 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 place waste material in closed container.  
Dispose of in accordance with federal, state 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 (2001) : 10 mg/m<sup>3</sup> (Total)  
3 mg/m<sup>3</sup> (Respirable)
- Precautionary Measures : None required when used as intended in Brother 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 Brother 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:	Black Powder / Faint Odor	Vapor Pressure:	Not applicable
Boiling Point(OC):	Not applicable	Softening Point:	Not available
Volatile (%):	Not applicable	Initial Boiling Point:	Not applicable
Specific Gravity(H <sub>2</sub> 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	Eye Irritant (rabbit):	Not an irritant
Human Patch	: Not available		
Sensitization	: Skin (guinea-pig)	: Not a sensitizer	
Acute Toxicity	Swallowed→LD50 (rat)	: > 5000 mg/kg <sup>1)</sup>	(practically non-toxic)
	Skin→LD50 (rabbit)	: > 5000 mg/kg <sup>1)</sup>	(practically non-toxic)
	Inhaled→LC50 (rat)	: > 5 mg/L/4hr <sup>1)</sup>	(practically non-toxic)

### Chronic Toxicity :

Prolonged inhalation of excessive dust may cause lung damage. It is attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust. In a study in rats by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of rats in the high concentration (16mg/m<sup>3</sup>) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m<sup>3</sup>) exposure group. But no pulmonary change was reported in the lowest (1mg/m<sup>3</sup>) exposure group, the most relevant level to potential human exposures.<sup>ref.1</sup>

Carcinogenicity : Not classified as "Carcinogens<sup>ref.2,</sup>".

Mutagenicity : Ames Assay: Negative

Reproduction and Development: Not classified as "Reproductive and Development chemicals<sup>ref.3,</sup>".

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

## 12. ECOLOGICAL INFORMATION

Biodegradability	: Not available.
Bioaccumulation	: Not available.
Acute Toxicity	:
	Fish 96hr LC50 (Oryzias latipes): > 500 mg/L
	Daphnia 48hr EC50 (Daphnia magna): > 100 mg/L
	Algae 72hr IC50 (Selenastrum capricornutum): > 100 mg/L
Other Information	: None

## 13.DISPOSAL CONSIDERATION

Dispose of in accordance with federal, state and local regulations.

## 14.TRANSPORT INFORMATION

Transport in accordance with federal , state, and local regulations.

## 15.REGULATORY INFORMATION

TSCA (USA): All chemical substances in this product complies with all applicable rules or orders under TSCA.

SARA Title III, Section 313 Reportable Ingredients (USA): None

Proposition 65 (California): None

EINECS (EU): All chemical substances in this product are listed in EINECS inventory.

Label information according to 88/379/EEC and 67/548/EEC (EU):

Symbol and Indication: Not required

R-Phrase: Not required

S-Phrase: Not required

## 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.

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**References**

- 1: ◆ Fundamental and Applied Toxicology 17, pp.280-299.
  - 2: ◆ IARC Monographs on the Evaluation Carcinogenic Risks to Humans (WHO.International Agency for Rsearch 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 provision s relating to the classification, packing and labelling of dangerous substaces; Annex 1 (EU)
    - ◆ Journal of Occupational Health(Japan Society for Occupational Heathh)
  - 3: ◆ 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)
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