Section 1 – Identification of the Substance/Preparation and of the Company/Undertaking

Product name: TN-310BK, TN-315BK, TN-320BK, TN-325BK, TN-328BK, TN-340BK, TN-345BK, TN-348BK, TN-370BK, TN-375BK, TN-378BK Toner

Material name: PT493

Use of Product: These products are black toner in a cartridge for Brother Industries, Ltd. laser printers, multifunction devices and fax receivers.
The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this MSDS is only consistent with the use specified by Brother.

Manufacturer: Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan
Telephone (for information): +81-52-824-2735

Importer in USA: Brother International Corporation
100 Somerset Corporate Boulevard, P.O. Box 6911, Bridgewater, NJ 08807-0911, USA
Telephone (for information): +1-800-284-4329

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

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
Level 3, Building A, 11 Talavera Road, Macquarie Park, NSW 2113, Australia
Telephone (for information): +61-2-9887-4344

We do not provide 24-hour cover, for information please telephone the appropriate office during business hours.

Emergency telephone number: **CHEMTREC** **+1-703-527-3887** **(International)**
1-800-424-9300 **(North America)**

For France Only:
Antipoison Center telephone number: **ORFILA** **+33-1-45-425-959**

E-mail address for information: **sds.info@brother.co.jp**

Section 2 – Hazards identification

Potential health effects from overexposure:

Possible routes of entry include skin/eye contact and dust inhalation. Minimal respiratory tract irritation may occur as with large amounts of any non-toxic dust. Overexposure to decomposition or combustion products may cause irritation of eyes, skin and respiratory tract. See Section 10 for information on combustion products.

Potential Health Effects:

Routes of exposure:

Possible routes of entry include skin/eye contact and dust inhalation.

Particulate inhalation:

Exposure to large amount of dust will cause lung irritation, difficult breathing, sneezing and/or coughing.

Use this product as intended in order to prevent the dust leakage that leads to dust inhalation.

Skin contact:

No symptoms will appear.

Eye contact:

May cause eye irritation. Use this product as intended in order to prevent the dust leakage that leads to eye contact.

Ingestion:

Stomach irritation will be caused. It is highly unlikely that ingestion occurs under intended use.

Special Hazards:

Like most powdered organic materials, toner can form explosive mixtures when dispersed in the air, if ignited, could result in a dust explosion.

EU Classification:

Not classified as hazardous according to EU Directive 1999/45/EC.

Australia Classification:

Not classified as hazardous according to the criteria of NOHSC.

Section 3 – Composition / information on ingredients

Chemical name: Styrene-acrylate Toner (Mixture)

Hazardous ingredients:

Component/ Substance	CAS Number	EC Number	%Wt.	EU Symbol letters / R Phrases
Carbon Black (bound)	1333-86-4	215-609-9	5.5 - 6.5	Not classified
Paraffin Wax	8002-74-2	232-315-6	3 - 4	Not classified
Silicon Dioxide (amorphous)	112945-52-5	231-545-4	0.5 - 1.5	Not classified
Silicon Dioxide (amorphous)	844491-94-7	430-570-1	0.5 - 1.5	Not classified

Other ingredients:

Component/ Substance	CAS Number	EC Number	%Wt.	EU Symbol letters / R Phrases
Styrene-acrylate Copolymer	25767-47-9	N/A	83 - 85	Not classified
PMMA	9011-14-7	N/A	2 - 3	Not classified
Fatty Acid Ester	Confidential	N/A	1 - 2	Not classified
Styrene-acrylic resin	Confidential	N/A	0.1 - 1	Not classified

Section 4 – First aid measures

If irritation occurs or persists from any route of exposure, remove the affected individual from the area and obtain medical attention.

Particulate inhalation: Obtain immediate medical attention. Remove casualty to fresh air and keep at rest.

Skin contact: Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.

Eye contact: Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.

Ingestion: Obtain immediate medical attention. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

Section 5 – Fire fighting measures

Extinguishing media:

Extinguish preferably with dry chemicals, carbon dioxide, water spray or foam.

Unsuitable extinguishing media:

High-pressure water

Special firefighting procedures:

Do not use high-pressure water in order to prevent creating a dust cloud and spreading fire dust. Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

Unusual fire and explosion hazards:

Thermal decomposition of organic components may result in occurrence of oxides of carbon.
Special precautions must be taken because most powdered organic materials can form explosive mixtures when dispersed in the air. Toxic gasses may be formed upon combustion and represents a hazard to firefighters. See Section 10 for additional information on combustion products.

Explosion limits: Lower = 50 - 60 g/m^3 (The data of a similar product is used.)

Section 6 – Accidental release measures

Personal precautions:

Minimize generation of toner dust. Avoid inhalation of the dust.

Environmental precautions:

Prevent from entering into the surface water or sewerage system.

Method of cleaning up:

Sweep the spilt toner or remove it with a vacuum cleaner, and transfer into the sealed container carefully. Sweep slowly to minimize generation of dust during clean-up. If the vacuum cleaner is used, the motor must be rated as dust explosion-proof. A conductive hose bonded to the machine should be used to reduce static build-up. Residue can be removed with soap and cold water.
Clothes may be washed or dry cleaned after removal of loose toner.
See section 13 for disposal considerations.

Section 7 – Handling and storage

Handling:

Keep out of the reach of children. In case of accidental spill, try not to disperse the particles. Avoid prolonged inhalation of excessive dust and contact eyes. Provide adequate ventilation. Use the mask, which recommended preventing dust and coarse particulate.

Storage:

Keep out of the reach of children. Keep away from oxidizing agents.

Section 8 – Exposure control / personal protection

Exposure limit value:

Ingredients	CAS Number	OSHA PEL	ACGIH TLV	EU IOELV
Carbon black	1333-86-4	3.5 mg/m^3 TWA	3.5 mg/m^3 TWA	None
Paraffin wax (fume)	8002-74-2	None	2 mg/m^3 TWA	None
Silicon Dioxide (amorphous)	112945-52-5	20mppcf 80(mg/m^3)/%SiO_2	None	None
Silicon Dioxide (amorphous)	844491-94-7	20mppcf 80(mg/m^3)/%SiO_2	None	None

Additional exposure data:

USA OSHA PEL (TWA): 15 mg/m^3 (Total dust), 5 mg/m^3 (Respirable Fraction)

ACGIH TLV (TWA): 10 mg/m^3 (Inhalable particles), 3 mg/m^3 (Respirable particles)

Environmental exposure control: Not required under normal use.

Ventilation: Good general ventilation should be sufficient under normal use.

Personal protective equipment:

Not required under normal use. For use other than in normal operating procedures (such as in the event of large spill), the following should be applied:

Eye/face: Safety goggles
Skin: Protective gloves
Respiratory: Dust mask (Respirator for large spill)

Section 9 – Physical and chemical properties

Appearance and odor:	Black powder and odorless
pH:	Not applicable
Boiling point/boiling range:	Not applicable
Melting point/melting range:	110 ˚C (softening point)
Flash point:	Not applicable
Flammability (solid, gas):	No data available
Explosive properties:	50 - 60 g/m^3 (Dust explosibility: Lower limit) (The data of a similar product is used.)
Oxidizing properties:	No data available
Vapor pressure:	Not applicable
Relative density:	1.15 (Specific Gravity H_2O =1)
Solubility:	No data available
Water solubility:	Negligible
Partition coefficient:n-octanol/water:	No data available
Viscosity:	Not applicable
Vapor density:	Not applicable
Evaporation rate:	Not applicable

Section 10 – Stability and reactivity

Stability:	Stable
Conditions to avoid:	Overheating (do not expose to temperature above 200˚C) and contact with ignition sources such as open flames, sparks, electrical arcs and static discharge sources.
Materials to avoid:	Strong oxidizers.
Hazardous decomposition products:	The gas generated by heat decomposition may contain carbon monoxide, carbon dioxide and nitrogen oxide.
Hazardous polymerization:	Will not occur

Section 11 – Toxicological information

Products

Acute oral toxicity:	No data available	
Acute inhalation toxicity:	No data available	
Skin irritation:	No data available	
Eye irritation:	No data available	
Mutagenicity:	Negative	(Method: OECD#471 / Ames test)
Skin Sensitization (LLNA):	No data available	

Carbon black

Carcinogenicity:

In 1996, the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals, for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity.
The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung.
Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Other ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA regulated.

Section 12 – Ecological information

No data available on the adverse effects of this product on the environment.

Ecotoxicity:	No data available
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulation potential:	No data available

Section 13 – Disposal considerations

Do not put toner or toner cartridge into fire. It causes burn injury from spread-fired toner.
When you shred a toner cartridge, do it at dust-explosion prevented place. Finely dispersed particles may form explosive mixtures in air.
Dispose of in compliance with Federal, State and local regulations.

Section 14 – Transportation information

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

UN Number: None

UN Classification: None

Not regulated under DOT, IMDG, ADR, RID, IATA.

Section 15 – Regulatory information

US Information

All components in this product are listed on TSCA inventory.

EU Information

Labelling (according to 1999/45/EC and 67/548/EEC)

Symbol, R phrase, S phrase: Not required.

Canada Information

WHMIS Controlled Product: Not applicable (Manufactured article)

Section 16 – Other information

The following sections contain revisions or new statements: All sections

Additional Information:

The information relates only to this product. It may not be valid, if used in combination with any other materials or in any other process. And it is based on our best knowledge as of the date of preparation (revision).

Reference:

- U.S. 29CFR Part 1910
- ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
- EU Directive 91/322/EEC and 2000/39/EC
- IARC Monographs on the Evaluation Carcinogenic Risks to Humans World Health Organization
- NTP 11th Report on Carcinogens

Abbreviations:

ACGIH:	American Conference of Governmental Industrial Hygienists
ADR:	European Agreement concerning the International carriage of Dangerous goods by Road （EU）
DOT:	Department Of Transportation (US)
EINECS:	European Inventory of Existing Commercial Chemical Substances (EU)
HCS:	Hazard Communication Standard (US)
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
IMDG:	International Maritime Dangerous Goods
IOELV:	Indicative Occupational Exposure Limit Value
NOHSC:	National Occupational Health and Safety Commission （Australia）
NTP:	National Toxicology Program (US)
OSHA:	Occupational Safety and Health Administration (US)
PEL:	Permissible Exposure Limit
RID:	Regulations concerning the International carriage of goods by Rail （EU）
TLV:	Threshold Limit Value
TSCA:	Toxic Substances Control Act (US)
WHMIS:	Workplace Hazardous Material Information System （Canada）