SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name: TN-720, TN-750, TN-780, TN-3310, TN-3320, TN-3330, TN-3335, TN-3340, TN-3350, TN-3360, TN-3370, TN-3380, TN-3385, TN-3390 and TN-3395 Toner

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s): 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 SDS is only consistent with the use specified by Brother.

1.3 Details of the supplier of the safety data sheet

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

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

Importer (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 (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 (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

E-Mail (competent person): sds.info@brother.co.jp

1.4 Emergency telephone number

Emergency Phone No. (24 hours): CHEMTREC

+1-703-527-3887 (International)
+1-800-424-9300 (North America)

For France only:
Antipoison Centre telephone number: ORFILA +33-1-45-425-959

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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.

2.2 Label elements Label elements according to EU Directive 1999/45/EC: None

2.3 Other hazards None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Styrene-acrylate Toner (Mixture).

Chemical Name	CAS No.	EC No.	%W/W	EU Hazard Symbols	EU Risk Phrases
Styrene-acrylate Copolymer	25767-47-9	Not applicable.	80 - 85	Not classified.	Not classified.
Carbon Black	1333-86-4	215-609-9	5 - 7	Not classified.	Not classified.
Paraffin Wax	8002-74-2	232-315-6	3 - 5	Not classified.	Not classified.
Fatty Acid Ester	Confidential	Not applicable.	3 - 5	Not classified.	Not classified.
PMMA	9011-14-7	Not applicable.	1 - 3	Not classified.	Not classified.
Styrene-acrylate Resin	Confidential	Not applicable.	0.1 - 2	Not classified.	Not classified.
Silicon Dioxide (amorphous)	84491-94-7	430-570-1	≤ 2	Not classified.	Not classified.
Silicon Dioxide (amorphous)	112945-52-5	231-545-4	≤ 1	Not classified.	Not classified.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: Obtain immediate medical attention. In case of accident by inhalation 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 medical attention. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

If symptoms persist, obtain medical attention.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media: Extinguish preferably with dry chemical, Carbon dioxide, Water spray, Foam.

Unsuitable Extinguishing Media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

May form explosible dust clouds in air.

5.3 Advice for fire-fighters

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust.
A suitable dust mask or dust respirator with filter type A/P may be appropriate.

6.2 Environmental precautions

Prevent substance entering sewers. Washings must be prevented from entering surface water drains.

6.3 Methods and material for containment and cleaning up

Sweep the spilt toner or remove it with a vacuum cleaner and transfer into a sealed container carefully. Sweep slowly to minimize generation of dust during clean-up. If a vacuum cleaner is used, the motor must be rated as dust explosion-proof.

Potential for very fine particles to be taken into the vacuum only to be passed back into the environment due to pore size in the bag or filter.

DISPOSAL CONSIDERATIONS - See Section: 13.

6.4 Reference to other sections

See Section: 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep out of the reach of children. Avoid dust generation. Avoid inhalation of high concentrations of dust. Avoid contact with eyes.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits:

Substance	CAS No.	OSHA PEL	ACGIH TLV	EU IOELV
Carbon Black	1333-86-4	3.5 mg/m^{3}TWA	3 mg/m^{3}TWA	None.
Paraffin Wax	8002-74-2	None.	2 mg/m^3 TWA	None.
Silicon Dioxide (amorphous)	84491-94-7	20mppcf 80 (mg/m^3)/% SiO_2	None.	None.
Silicon Dioxide (amorphous)	112945-52-5	20mppcf 80 (mg/m^3)/% SiO_2	None.	None.

Additional Information: USA OSHA PEL (TWA): 15 mg/m^3 (Total Dust) 5mg/m^3 (Respirable Fraction).
ACGIH TLV (TWA): 10 mg/m^3 (Inhalable particles) 3 mg/m^3 (Respirable particles).

8.2 Exposure controls

Not normally required.

Appropriate engineering controls

Good general ventilation should be sufficient under normal use.

Personal Protection

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

Eye/face protection: Goggles.
Skin protection: Protective gloves.
Respiratory protection: Dust mask. (Large spillages: Respirator).
Other: Not applicable.

Environmental Exposure Controls

Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance (20 ^{0}C):	Solid, Powder.
Color:	Black.
Odor:	Odorless.
Boiling point/boiling range (°C):	Not applicable.
Melting point (°C) / Freezing point (°C):	No data.
Vapor pressure (Pascal):	Not applicable.
pH (Value):	Not applicable.
Viscosity (mPa. s):	Not applicable.
Flash point (°C):	Not applicable.
Explosive limit ranges:	No data.
Explosive properties:	May form explosible dust clouds in air.
Specific Gravity:	No data.
Vapor density (Air=1):	Not applicable.
Partition coefficient (n-Octanol/water):	No data.
Relative Evaporation Rate (Butyl Acetate = 1):	Not applicable.
Oxidising properties:	No data.
Solubility (Water):	Negligible.
Solubility (Other):	No data.

9.2 Other information None.

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	None anticipated.
10.2	**Chemical stability**	Stable.
10.3	**Possibility of hazardous reactions**	None.
10.4	**Conditions to avoid**	Keep at temperature not exceeding: 200°C. Avoid friction, sparks, or other means of ignition.
10.5	**Incompatible materials**	Strong oxidising agents.
10.6	**Hazardous Decomposition Product(s)**	Contains: Carbon monoxide, Carbon dioxide and Nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Ingestion:	Acute LD_{50} > 2000mg/kg (Method: OECD#420)
Inhalation:	Acute LC_{50} > 3.4mg/l (The highest technically achievable concentration) (Method: OECD#436)
Skin Contact:	No data.
Eye Contact:	No data.
Skin corrosion/irritation:	Non-irritant. (Method: OECD#404)
Serious eye damage/irritation:	Slight irritant to the eye. (Method: OECD#405)
Respiratory or skin sensitization:	It is not a skin sensitizer. (Method: OECD#429)
Mutagenicity:	Negative. (Method: OECD#471 / Ames test)
Carcinogenicity:	**Carbon Black:** 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.**
Reproductive toxicity:	No data.
STOT-single exposure:	No data.
STOT-repeated exposure:	No data.
Aspiration hazard:	No data.

Potential Health Effects from overexposure:

Routes of exposure:
Skin Contact, Eye Contact, Inhalation (Dust).

Minimal respiratory tract irritation may occur as with large amounts of any non-toxic dust. Thermal decomposition will evolve toxic and irritant vapors.

Combustion products: See Section: 10.

Potential Health Effects:

Routes of exposure:
Skin Contact, Eye Contact, Inhalation (Dust).

Inhalation (Dust). For large quantities:
May cause irritation to the respiratory system. Effects and Symptoms - Increased difficulty in breathing. Sneezing. Coughing. Use this product as intended in order to prevent the dust leakage that leads to exposure.

Skin Contact:
No specific effects and/or symptoms have been reported or known.

Eye Contact:
May cause eye irritation. Use this product as intended in order to prevent the dust leakage that leads to exposure.

Ingestion:
May cause stomach ache. Unlikely route of exposure.

SECTION 12: ECOLOGICAL INFORMATION

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

12.1	**Toxicity**	No data.
12.2	**Persistence and degradability**	No data.
12.3	**Bioaccumulative potential**	No data.
12.4	**Mobility in soil**	No data.
12.5	**Results of PBT and vPvB assessment**	No data.
12.6	**Other adverse effects**	No data.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Do not put toner or toner cartridges into a fire, this can cause fire to spread with the risk of causing burn injuries. Shred toner cartridges in a dust/explosion controlled environment. Finely dispersed particles may form explosive mixtures in the air. Dispose of in compliance with Federal, State and local regulations.

SECTION 14: TRANSPORT INFORMATION

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

14.1	**UN number**	None.
14.2	**Proper Shipping Name**	None.
14.3	**Transport hazard class(es)**	None.
14.4	**Packing Group**	None.
14.5	**Environmental hazards**	None.
14.6	**Special precautions for user**	None.
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture**	**EU:** Not classified as dangerous for supply/use. (1999/45/EC, 67/548/EEC) Hazard Symbol, Risk Phrases, Safety Phrases: None assigned. **USA:** All chemicals in this product comply with TSCA rules and regulations including TSCA Section 5 (Inventory Rules). **WHMIS:** Not applicable. (Manufactured article)
15.2	**Chemical Safety Assessment**	No.

SECTION 16: OTHER INFORMATION

Hazard Symbol: None.

Risk Phrases: None.

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).

References: 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
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 (ACGIH)
TSCA: Toxic Substances Control Act (US)
WHMIS: Workplace Hazardous Material Information System (Canada)