

## SAFETY DATA SHEETS

**This SDS packet was issued with item:**

071502343

N/A

**Revision Date:** 10-Sep-2018

**Issuing Date:** 06-Jul-2017

**Revision Number:** 2

**Product Name:** TN-213BK, TN-223BK, TN-233BK, TN-243BK, TN-253BK, TN-263BK, TN-273BK, TN-283BK, TN-293BK, TN-217BK, TN-227BK, TN-237BK, TN-247BK, TN-267BK, TN-277BK, TN-287BK toner

**Safety data sheet number:** PT405-02

## 1. IDENTIFICATION

### Product identifier

**Product Name** TN-213BK, TN-223BK, TN-233BK, TN-243BK, TN-253BK, TN-263BK, TN-273BK, TN-283BK, TN-293BK, TN-217BK, TN-227BK, TN-237BK, TN-247BK, TN-267BK, TN-277BK, TN-287BK toner

### Other means of identification

**Product Code(s)** PT405-02

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended Use** No information available

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

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

**Supplier Address** Brother International Corporation  
200 Crossing Boulevard, Bridgewater, NJ 08807, USA  
Telephone (for information): +1-877-276-8437

### Emergency telephone number

**Emergency Telephone** CHEMTREC +1-800-424-9300

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## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

The product contains no substances which at their given concentration, are considered to be hazardous to health.

#### **Appearance**

**Physical state:** Powder **Odor:** Odorless

### Other Information

#### **Unknown acute toxicity**

99 % of the mixture consists of ingredient(s) of unknown toxicity

89 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

99 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

99 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

99 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Substance

Not applicable.

### Mixture

| Chemical name               | CAS No      | Weight-% | Trade secret |
|-----------------------------|-------------|----------|--------------|
| Styrene-acrylate-copolymer  | 25767-47-9  | 65-75    | *            |
| Fatty acid ester            | **          | 8-18     | *            |
| Carbon Black (bound)        | 1333-86-4   | 4-14     | *            |
| Styrene-acrylate Resin      | **          | <7       | *            |
| PMMA                        | 9011-14-7   | 1-5      | *            |
| Silicon dioxide (amorphous) | 112945-52-5 | <3       | *            |
| Silicon Dioxide (amorphous) | 7631-86-9   | <3       | *            |
| Silicon dioxide (amorphous) | 844491-94-7 | <3       | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

\*\* Trade secret

## 4. FIRST AID MEASURES

### Description of first aid measures

|              |  |
|--------------|--|
| Inhalation   | Remove to fresh air.   |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.                 |
| Ingestion    | Clean mouth with water and drink afterwards plenty of water.   |

### Most important symptoms and effects, both acute and delayed

|          |   |
|----------|---|
| Symptoms | Inhalation ( dust ) : For large quantities: May cause irritation to the respiratory system. Increased difficulty in breathing. Sneezing. Coughing<br>Eye contact: May cause eye irritation<br>Skin contact : Repeated and/or prolonged skin contact may cause irritation<br>Ingestion: May cause stomach ache. Unlikely route of exposure |
|----------|---|

### Indication of any immediate medical attention and special treatment needed

|                    |                        |
|--------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|--------------------|------------------------|

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## 5. FIRE-FIGHTING MEASURES

|   |  |
|---|--|
| <b>Suitable Extinguishing Media</b>                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  |
| <b>Unsuitable extinguishing media</b>                 | Do not use water jet.  |
| <b>Specific hazards arising from the chemical</b>     | May form explosive dust clouds in air  |
| <b>Explosion data</b>                                 |  |
| <b>Sensitivity to Mechanical Impact</b>               | None.  |
| <b>Sensitivity to Static Discharge</b>                | None.  |
| <b>Special protective equipment for fire-fighters</b> | 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. |

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

|                             |   |
|-----------------------------|---|
| <b>Personal precautions</b> | Avoid generation of dust. Do not breathe dust. A suitable dust mask or dust respirator with filter type A/P may be appropriate. |
|-----------------------------|---|

### Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas

### Methods and material for containment and cleaning up

|  |   |
|--|---|
| <b>Methods for containment</b>         | 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 cleanup. 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. |
| <b>Methods for cleaning up</b>         | Take up mechanically, placing in appropriate containers for disposal.   |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations.  |

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on safe handling**

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

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place.

These products are black toner in a cartridge for Brother Industries, Ltd. laser printers, multifunction devices and fax receivers. This cartridge should be used as supplied by Brother and for use in the products stated.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

| Chemical name                            | ACGIH TLV  | OSHA PEL  | NIOSH IDLH  |
|--|--|---|---|
| Carbon Black (bound)<br>1333-86-4        | TWA: 3 mg/m <sup>3</sup> inhalable<br>particulate matter | TWA: 3.5 mg/m <sup>3</sup><br>(vacated) TWA: 3.5 mg/m <sup>3</sup>  | IDLH: 1750 mg/m <sup>3</sup><br>TWA: 3.5 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup> Carbon black<br>in presence of Polycyclic<br>aromatic hydrocarbons PAH |
| Silicon Dioxide (amorphous)<br>7631-86-9 | No data available  | (vacated) TWA: 6 mg/m <sup>3</sup><br><1% Crystalline silica<br>TWA: 20 mppcf<br>: (80)/(% SiO <sub>2</sub> ) mg/m <sup>3</sup> TWA | IDLH: 3000 mg/m <sup>3</sup><br>TWA: 6 mg/m <sup>3</sup>  |

### Appropriate engineering controls

#### **Engineering controls**

Good general ventilation should be sufficient under normal use.

### Individual protection measures, such as personal protective equipment

#### **Eye/face protection**

No special protective equipment required.

#### **Skin and body protection**

No special protective equipment required.

#### **Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

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**Environmental exposure controls** Avoid release to the environment.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### Appearance

|                |                          |
|----------------|--------------------------|
| Physical state | Powder                   |
| Color          | black                    |
| Odor           | Odorless                 |
| Odor threshold | No information available |

#### Property

#### Values

#### Remarks • Method

|                                |                          |  |
|--------------------------------|--------------------------|--|
| pH                             | No data available        | None known   |
| Melting point / freezing point | No data available        | None known   |
| Boiling point / boiling range  | No data available        | None known   |
| Flash point                    | No data available        | None known   |
| Evaporation rate               | No data available        | None known   |
| Flammability (solid, gas)      | No data available        | None known   |
| Flammability Limit in Air      |                          | None known   |
| Upper flammability limit:      | No data available        |  |
| Lower flammability limit:      | No data available        |  |
| Vapor pressure                 | No data available        | None known   |
| Vapor density                  | No data available        | None known   |
| Relative density               | No data available        | None known   |
| Water solubility               | Insoluble in water       |  |
| Solubility(ies)                | No data available        | None known   |
| Partition coefficient          | No data available        | None known   |
| Autoignition temperature       | No data available        | None known   |
| Decomposition temperature      | No data available        | None known   |
| Kinematic viscosity            | No data available        | None known   |
| Dynamic viscosity              |                          | None known   |
| Explosive properties           | No information available | Explosive limits of toner particles suspended in air approximately equal to that of coal dust. |
| Oxidizing properties           | No information available |  |

#### Other Information

|                  |                          |
|------------------|--------------------------|
| Softening point  | No information available |
| Molecular weight | No information available |
| VOC Content (%)  | No information available |
| Liquid Density   | No information available |
| Bulk density     | No information available |

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## 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| <b>Reactivity</b>                         | No information available.   |
| <b>Chemical stability</b>                 | Stable under normal conditions.   |
| <b>Possibility of hazardous reactions</b> | None under normal processing.   |
| <b>Conditions to avoid</b>                | Keep away from heat. Avoid friction, sparks, or other means of ignition |
| <b>Incompatible materials</b>             | Strong oxidizing agents   |
| <b>Hazardous decomposition products</b>   | Carbon oxides. Nitrogen oxides (NOx).                                   |

## 11. TOXICOLOGICAL INFORMATION

### Product Information

|  |  |
|--|--|
| <b>Inhalation</b>                        | Acute LC <sub>50</sub> > 5.2 mg/l/4h (OECD 436 method)   |
| <b>Eye contact</b>                       | No information available   |
| <b>Skin contact</b>                      | No information available   |
| <b>Ingestion</b>                         | Acute LD <sub>50</sub> > 2000 mg/kg (OECD 420 method)  |
| <b>Skin corrosion/irritation</b>         | Non-irritant (OECD 404 method)   |
| <b>Serious eye damage/irritation</b>     | Minimal irritant to the eye (OECD 405 method)  |
| <b>Respiratory or skin sensitization</b> | It is not a skin sensitizer (OECD 429 method)  |
| <b>Germ cell mutagenicity</b>            | AMES test : Negative (OECD 471 method)   |
| <b>Carcinogenicity</b>                   | Carbon Black: In 1996, the IARC re-evaluated 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.<br><b>Other ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA</b> |



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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

| Chemical name                            | Algae/aquatic plants                                | Fish  | Toxicity to microorganisms | Crustacea                               |
|--|---|---|----------------------------|---|
| Carbon Black (bound)<br>1333-86-4        | -   | -   | -                          | 5600: 24 h Daphnia magna mg/L EC50      |
| Silicon Dioxide (amorphous)<br>7631-86-9 | 440: 72 h Pseudokirchneriella subcapitata mg/L EC50 | 5000: 96 h Brachydanio rerio mg/L LC50 static | -                          | 7600: 48 h Ceriodaphnia dubia mg/L EC50 |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from residues/unused products** 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 accordance with Federal, State, and local regulations.

**Contaminated packaging** Do not reuse empty containers.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated

**ICAO (air)** Not regulated

**IATA** Not regulated

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**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

|                      |          |
|----------------------|----------|
| <b>TSCA</b>          | Complies |
| <b>DSL/NDL</b>       | Exempt   |
| <b>EINECS/ELINCS</b> | Complies |
| <b>ENCS</b>          | Complies |
| <b>IECSC</b>         | Complies |
| <b>KECL</b>          | Complies |
| <b>PICCS</b>         | Exempt   |
| <b>AICS</b>          | Complies |

### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### SARA 311/312 Hazard Categories

|  |    |
|--|----|
| <b>Acute health hazard</b>               | No |
| <b>Chronic Health Hazard</b>             | No |
| <b>Fire hazard</b>                       | No |
| <b>Sudden release of pressure hazard</b> | No |
| <b>Reactive Hazard</b>                   | No |

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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## CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

## U.S. State Right-to-Know Regulations

### US State Regulations

| Chemical name                     | New Jersey | Massachusetts | Pennsylvania |
|-----------------------------------|------------|---------------|--------------|
| Carbon Black (bound)<br>1333-86-4 | X          | X             | X            |

## U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

|             |                  |                |                    |   |
|-------------|------------------|----------------|--------------------|---|
| <u>NFPA</u> | Health hazards 0 | Flammability 0 | Instability 0      | Section 9: Physical and chemical properties - |
| <u>HMIS</u> | Health hazards 0 | Flammability 0 | Physical hazards 0 | Personal protection X                         |

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Revision Note No information available.

### Disclaimer

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).

End of Safety Data Sheet