# SAFETY DATA SHEET

**Revision Date:** 15-Jun-2020
**Issuing Date:** 24-Nov-2008
Revision Number: 8

Product Name: TN-3230, TN-3280, TN-620, TN-650, TN-3250, TN-3290, TN-3235, TN-3285 Toner

Safety data sheet number: PT481-01

## 1. IDENTIFICATION

**Product identifier**

**Product Name** TN-3230, TN-3280, TN-620, TN-650, TN-3250, TN-3290, TN-3235, TN-3285 Toner

**Other means of identification**

**Synonyms** None

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

**Recommended Use** 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. Information provided on this SDS is only consistent with the use specified by Brother.

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

## 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** Solid Powder **Odor:** Odorless

**Other Information**

**Unknown acute toxicity**

98.75 % of the mixture consists of ingredient(s) of unknown toxicity
98.75 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
98.75 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
98.75 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Not applicable.

**Mixture**

| Chemical name | CAS No | Weight-% | Trade secret |
|---|---|---|---|
| Styrene-acrylate-copolymer | 25767-47-9 | 84-87 | * |
| Carbon Black (bound) | 1333-86-4 | 5-7 | * |
| Fatty acid ester | ** | 4-5 | * |
| Styrene-acrylate Resin | ** | 1-2 | * |
| PMMA | 9011-14-7 | 1-3 | * |
| Silicon dioxide (amorphous) | 844491-94-7 | <1 | * |
| Silicon Dioxide (amorphous) | 7631-86-9 | <1 | * |

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

** Trade secret

## 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** — If symptoms persist, call a physician.

**Inhalation** — IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.

**Eye contact** — Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact:** — Take off contaminated clothing. Wash off immediately with soap and plenty of water.

**Ingestion** — Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink.

**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
Eye contact: May cause eye irritation
Ingestion: May cause stomach ache. Unlikely route of exposure

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

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Dry chemical, $CO_2$, water spray or regular foam

**Unsuitable extinguishing media** Do not use water jet.

**Specific hazards arising from the chemical** May form explosive dust clouds in air.

**Explosion data**
**Sensitivity to Mechanical Impact** None.
**Sensitivity to Static Discharge** None.

**Special protective equipment 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.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

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

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

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

**Methods and material for containment and cleaning up**

**Methods for containment** 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.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 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 away from oxidizing agents

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$^3$ inhalable particulate matter | TWA: 3.5 mg/m$^3$<br>(vacated) TWA: 3.5 mg/m$^3$ | IDLH: 1750 mg/m$^3$<br>TWA: 3.5 mg/m$^3$<br>TWA: 0.1 mg/m$^3$ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH |
| Silicon Dioxide (amorphous)<br>7631-86-9 | No data available | (vacated) TWA: 6 mg/m$^3$<br><1% Crystalline silica<br>TWA: 20 mppcf<br>: (80)/(% SiO2) mg/m$^3$ TWA | IDLH: 3000 mg/m$^3$<br>TWA: 6 mg/m$^3$ |

**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** If there is a risk of contact:. Safety goggles.

**Hand protection** If there is a risk of contact:. Protective gloves.

**Skin and body protection** If there is a risk of contact:. Long sleeved clothing and long pants.

**Respiratory protection** Face Mask. In case of large spillages: Wear suitable respiratory protective equipment.

**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** | Solid Powder | |
| **Color** | black | |
| **Odor** | Odorless | |
| **Odor threshold** | No information available | |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | Not applicable | |
| **Melting point / freezing point** | 110 °C | |
| **Boiling point / boiling range** | Not applicable | |
| **Flash point** | Not applicable | |
| **Evaporation rate** | Not applicable | |
| **Flammability (solid, gas)** | Not applicable | |
| **Flammability Limit in Air** | | None known |
| **Upper flammability limit:** | No data available | |
| **Lower flammability limit:** | 85-90 g/$m^3$ | |
| **Vapor pressure** | Not applicable | |
| **Vapor density** | Not applicable | |
| **Relative density** | 1.15 | ($H_2O$=1) |
| **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** | Not applicable | |
| **Dynamic viscosity** | Not applicable | |
| **Explosive properties** | Explosive limits of toner particles | No information available. |

| | |
|---|---|
| | 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 |

## 10. STABILITY AND REACTIVITY

**Reactivity** No information available.

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** No information available.

**Conditions to avoid** Keep away from heat. Avoid friction, sparks, or other means of ignition

**Incompatible materials** Strong oxidizing agents

**Hazardous decomposition products** Carbon monoxide. Carbon dioxide ($CO_2$). Nitrogen oxides (NOx).

## 11. TOXICOLOGICAL INFORMATION

**Product Information**

**Inhalation** Acute $LC_{50}$ > 5.30 mg/l (OECD 403 method)

**Eye contact** No information available

**Skin contact:** No information available

**Ingestion** Acute $LD_{50}$ > 2000 mg/kg (OECD 420 method)

**Skin corrosion/irritation** Non-irritant (OECD 404 method)

**Serious eye damage/irritation** Slight irritant to the eye (OECD 405 method)

**Respiratory or skin sensitization** It is not a skin sensitizer (OECD 429 method)

**Germ cell mutagenicity** AMES test : Negative (OECD 471 method)

**Carcinogenicity** 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.

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

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** .

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Carbon Black (bound) 1333-86-4 | - | - | - | 5600: 24 h Daphnia magna mg/L EC50 |
| Silicon Dioxide (amorphous) 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

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

**TDG** Not regulated

| | |
|---|---|
| **MEX** | Not regulated |
| **ICAO (air)** | Not regulated |
| **IATA** | Not regulated |
| **IMDG** | Not regulated |
| **RID** | Not regulated |
| **ADR** | Not regulated |
| **ADN** | Not regulated |

## 15. REGULATORY INFORMATION

**International Inventories**

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |
| **EINECS/ELINCS** | Complies |
| **ENCS** | Complies |
| **IECSC** | Complies |
| **KECL** | Complies |
| **PICCS** | Complies |
| **AICS** | Complies |

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - 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**

| | |
|---|---|
| **Acute health hazard** | No |
| **Chronic Health Hazard** | No |
| **Fire hazard** | No |
| **Sudden release of pressure hazard** | No |
| **Reactive Hazard** | 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).

**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

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NFPA** | **Health hazards** 0 | **Flammability** 0 | **Instability** 0 | | **Section 9: Physical and chemical properties** - |
| **HMIS** | **Health hazards** 0 | **Flammability** 0 | **Physical hazards** 0 | | **Personal protection** X |

**Issuing Date** 24-Nov-2008

**Revision Date** 15-Jun-2020

**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**