

Revision Date: 15-Jun-2020

Issuing Date: 12-Sep-2013

Revision Number: 5

Product Name: TN-311BK TN-316BK, TN-319BK, TN-321BK, TN-326BK, TN-329BK, TN-331BK, TN-336BK, TN-339BK, TN-341BK, TN-346BK, TN-349BK, TN-351BK, TN-359BK, TN-376BK, TN-379BK, TN-361BK, TN-369BK, TN-900BK Toner

Safety data sheet number: PT413-01

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product Name** TN-311BK TN-316BK, TN-319BK, TN-321BK, TN-326BK, TN-329BK, TN-331BK, TN-336BK, TN-339BK, TN-341BK, TN-346BK, TN-349BK, TN-351BK, TN-359BK, TN-376BK, TN-379BK, TN-361BK, TN-369BK, TN-900BK Toner

**Product Form** Mixture

**Safety data sheet number** PT413-01

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

**Relevant identified uses** 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

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

### For further information, please contact

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

### 1.4. Emergency telephone number

**Emergency Telephone** CHEMTREC +1-703-527-3887 (International)

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

## Section 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No 1272/2008**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

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**2.2. Label elements**

**Regulation (EC) No 1272/2008**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

**2.3. Other hazards**

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**Section 3: Composition/information on ingredients**

**3.1 Substances**

Not applicable

**3.2 Mixtures**

Chemical name	CAS No	EC No	EC Index No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Styrene-acrylate-copolymer	25767-47-9	-	-	70-80	Not classified	No data available
Fatty acid ester	**	-	-	10-20	Not classified	No data available
Carbon Black (bound)	1333-86-4	215-609-9	-	5-7	Not classified	No data available
PMMA	9011-14-7	-	-	1-3	Not classified	No data available
Silicon Dioxide (amorphous)	7631-86-9	231-545-4	-	<2	Not classified	No data available
Silicon dioxide (amorphous)	112945-52-5	231-545-4	-	<2	Not classified	No data available
Styrene-acrylate Resin	**	-	-	<1	Not classified	No data available
Silicon dioxide (amorphous)	844491-94-7	430-570-1	-	<1	Not classified	No data available

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Full text of H- and EUH-phrases: see section 16

**Section 4: First aid measures**

**4.1. Description of first aid measures**

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

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<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact:</b>	Take off contaminated clothing. Wash off immediately with soap and plenty of water.
<b>Ingestion</b>	Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink.

**4.2. Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	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
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**4.3. Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Treat symptomatically.
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**Section 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable Extinguishing Media** Dry chemical, CO<sub>2</sub>, water spray or regular foam

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

**5.2. Special hazards arising from the substance or mixture**

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

**5.3. Advice for firefighters**

**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.

**Section 6: Accidental release measures**

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

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**For non-emergency personnel** 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.

**6.2. Environmental precautions**

**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**

**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.

**6.4. Reference to other sections**

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

**Section 7: Handling and storage**

**7.1. 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

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

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep away from oxidizing agents

**7.3. Specific end use(s)**

**Specific use(s)** 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.

**Section 8: Exposure controls and personal protection**

**8.1. Control parameters**

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**Exposure Limits**

Chemical name	European Union	United Kingdom	France	Spain	Germany
Carbon Black (bound) 1333-86-4	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	-
Silicon Dioxide (amorphous) 7631-86-9	-	TWA: 6 mg/m <sup>3</sup> TWA: 2.4 mg/m <sup>3</sup> STEL: 18 mg/m <sup>3</sup> STEL: 7.2 mg/m <sup>3</sup>	-	-	TWA: 4 mg/m <sup>3</sup>
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Carbon Black (bound) 1333-86-4	-	TWA: 3.5 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>
Silicon Dioxide (amorphous) 7631-86-9	-	-	-	TWA: 5 mg/m <sup>3</sup>	-
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Carbon Black (bound) 1333-86-4	-	-	TWA: 4.0 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>
Silicon Dioxide (amorphous) 7631-86-9	TWA: 4 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>	-	TWA: 1.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup> TWA: 2.4 mg/m <sup>3</sup> STEL: 18 mg/m <sup>3</sup> STEL: 7.2 mg/m <sup>3</sup>
Silicon dioxide (amorphous) 112945-52-5	TWA: 4 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>	-	-	-

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Appropriate engineering controls** Good general ventilation should be sufficient under normal use.

**Personal protective equipment** 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** Safety goggles.

**Hand protection** Protective gloves.

**Skin and body protection** 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.

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## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	
Physical state	Solid Powder
Color	black
Odor	Odorless.
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	Not applicable	None known
Flash point	Not applicable	None known
Evaporation rate	Not applicable	None known
Flammability (solid, gas)	Not applicable	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	Not applicable	None known
Vapor density	Not applicable	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	Not applicable	None known
Dynamic viscosity	Not applicable	None known
Explosive properties	Explosive limits of toner particles suspended in air approximately equal to that of coal dust	No information available
Oxidizing properties	No information available	

### 9.2. Other information

No information available

## Section 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable under normal conditions.

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**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

Keep away from heat. Avoid friction, sparks, or other means of ignition

**10.5. Incompatible materials**

Strong oxidizing agents

**10.6. Hazardous decomposition products**

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>)

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**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)

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	9,939.50 mg/kg
<b>ATEmix (dermal)</b>	4,004.00 mg/kg
<b>Skin corrosion/irritation</b>	Non-irritant (OECD 404 method)
<b>Serious eye damage/eye 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

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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** Not classified.  
**STOT - single exposure** Not classified.  
**STOT - repeated exposure** Not classified.  
**Aspiration hazard** Not classified.

**Section 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity**

Contains 0 % of components with unknown hazards to the aquatic environment.

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

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).  
 This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).



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**12.6. Other adverse effects**

No information available.

**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 accordance with Federal, State, and local regulations

**Section 14: Transport information**

**IMDG**

14.1 UN/ID no	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable

**RID**

14.1 UN/ID no	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

**ADR**

14.1 UN/ID no	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

**IATA**

14.1 UN/ID no	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated

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**14.5 Environmental hazard** Not applicable  
**14.6 Special Provisions** None

## Section 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU-Regulations

- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XVII.
- \* Contains no substance listed in REACH Regulation (EC) No.1907/2006 Candidate List for Authorization.
- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XIV.

#### National Regulations

No information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## Section 16: Other information

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### **Legend**

SVHC: Substances of Very High Concern for Authorization:

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
\*\* Trade secret

#### **Key literature references and sources for data**

No information available

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**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

#### **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).**