

Product name: TN-820, TN-850, TN-880, TN-890, TN-3400, TN-3410, TN-3415, TN-3417, TN-3420, TN-3422, TN-3425, TN-3428, TN-3429, TN-3430, TN-3435, TN-3437, TN-3440, TN-3442, TN-3448, TN-3449, TN-3465, TN-3467, TN-3470, TN-3472, TN-3475, TN-3478, TN-3479, TN-3480, TN-3485, TN-3487, TN-3490, TN-3492, TN-3495, TN-3498, TN-3499, TN-3500, TN-3510, TN-3512, TN-3520, TN-4638 Toner

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

### 1.1. Product identifier

Product form : Mixture  
Product name : TN-820, TN-850, TN-880, TN-890, TN-3400, TN-3410, TN-3415, TN-3417, TN-3420, TN-3422, TN-3425, TN-3428, TN-3429, TN-3430, TN-3435, TN-3437, TN-3440, TN-3442, TN-3448, TN-3449, TN-3465, TN-3467, TN-3470, TN-3472, TN-3475, TN-3478, TN-3479, TN-3480, TN-3485, TN-3487, TN-3490, TN-3492, TN-3495, TN-3498, TN-3499, TN-3500, TN-3510, TN-3512, TN-3520, TN-4638 Toner

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : 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

#### 1.2.2. Uses advised against

No additional 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 (USA) : Brother International Corporation  
200 Crossing Boulevard, Bridgewater, NJ 08807, USA  
Telephone (for information): +1-877-276-8437

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 Address : sds.info@brother.co.jp

### 1.4. Emergency telephone number

Emergency number : CHEMTREC  
+1-703-527-3887 (International)  
+1-800-424-9300 (North America)  
+61-290372994 (Australia)

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

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to OSHA GHS

Not classified

Australia Classification

Not classified as hazardous according to the criteria of NOHSC

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**2.2. Label elements**

**Labeling according to Regulation (EC) No. 1272/2008 [CLP]**

No labeling applicable

**2.3. Other hazards**

This substance/mixture does not meet the PBT criteria of REACH, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

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

**3.2. Mixture**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Styrene-acrylate copolymer	(CAS No) 25767-47-9 (EC no) -	65 - 80	Not classified
Ester wax	(CAS No) ** (EC no) **	10 - 20	Not classified
Carbon Black (bound)	(CAS No) 1333-86-4 (EC no) 215-609-9	4 - 7	Not classified
Resin	(CAS No) ** (EC no) **	0.5 - 3	Not classified
PMMA	(CAS No) 9011-14-7 (EC no) -	1 - 4	Not classified
Silicon dioxide (amorphous)	(CAS No) ** (EC no) **	< 1	Not classified
Silicon dioxide (amorphous)	(CAS No) ** (EC no) **	< 1.5	Not classified
Styrene-acrylate Resin	(CAS No) ** (EC no) -	0.5 - 2.5	Not classified

\*\* CONFIDENTIAL

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

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures general : If symptoms persist, obtain medical attention.  
 First-aid measures after inhalation : Obtain medical attention. In case of accident by inhalation : remove casualty to fresh air and keep at rest.  
 First-aid measures after skin contact : Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.  
 First-aid measures after eye contact : Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.  
 First-aid measures after ingestion : 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**

Symptoms/injuries after inhalation : For large quantities: May cause irritation to the respiratory system. Increased difficulty in breathing. Sneezing. Coughing.  
 Symptoms/injuries after eye contact : May cause eye irritation.  
 Symptoms/injuries after ingestion : May cause stomach ache. Unlikely route of exposure.

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

Treat symptomatically.

**SECTION 5: Firefighting 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.

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

Explosion hazard : May form explosible dust clouds in air.

**5.3. Advice for firefighters**

Firefighting instructions : 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**

**6.1.1. For non-emergency personnel**

Emergency procedures : Ensure adequate ventilation. Avoid contact with skin and eyes.

**6.1.2. For emergency responders**

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**

Methods for 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 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.

**6.4. Reference to other sections**

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Precautions for safe handling : Keep out of the reach of children. Avoid generation of dust. Avoid inhalation of high concentrations of dust. Avoid contact with eyes.

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

Storage conditions : 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. This 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**

<b>Carbon Black (bound) (1333-86-4)</b>		
Belgium	Local name	Carbone (noir de)
Belgium	Limit value (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Croatia	Local name	Ug jik-crni
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vr jednost izloženosti) (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
Denmark	Local name	Carbon black
Denmark	Limit (long-term) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Denmark	Anmærkninger (DK)	K
Finland	Local name	Nokimusta

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<b>Carbon Black (bound) (1333-86-4)</b>		
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min)	7 mg/m <sup>3</sup>
France	Local name	Noir de carbone
France	VME (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Ireland	Local name	Carbon black
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
Portugal	Local name	Carbono, preto (Negro de fumo)
Portugal	OEL TWA (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Spain	Local name	Negro de humo
Spain	VLA-ED (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
United Kingdom	Local name	Carbon black
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
Norway	Local name	Carbon Black (lampesot)
Norway	TWA (AN) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
USA - ACGIH	Local name	Carbon black
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
USA - ACGIH	Remark (ACGIH)	Bronchitis
USA - OSHA	Local name	Carbon black
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
<b>Silicon dioxide (amorphous) (112945-52-5)</b>		
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> 20mppcf 80%SiO <sub>2</sub>
<b>Silicon dioxide (amorphous) (844491-94-7)</b>		
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> 20mppcf 80%SiO <sub>2</sub>

ACGIH TLV (TWA) : 10 mg/m<sup>3</sup> (Inhalable particles) 3 mg/m<sup>3</sup> (Respirable particles)

USA OSHA PEL (TWA) : 10 mg/m<sup>3</sup> (Total dust) 5 mg/m<sup>3</sup> (Respirable Fraction)

**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:

Hand protection : protective gloves.

Eye protection : Safety goggles.

Skin and body protection : Long sleeved clothing and long pants.

Respiratory protection : Dust mask. (Large spillages: Respirator).

Environmental exposure controls : Avoid release to the environment.

Product name: TN-820, TN-850, TN-880, TN-890, TN-3400, TN-3410, TN-3415, TN-3417, TN-3420, TN-3422, TN-3425, TN-3428, TN-3429, TN-3430, TN-3435, TN-3437, TN-3440, TN-3442, TN-3448, TN-3449, TN-3465, TN-3467, TN-3470, TN-3472, TN-3475, TN-3478, TN-3479, TN-3480, TN-3485, TN-3487, TN-3490, TN-3492, TN-3495, TN-3498, TN-3499, TN-3500, TN-3510, TN-3512, TN-3520, TN-4638 Toner

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## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Powder
Color	: Black
Odor	: odorless
Odor threshold	: No information available
pH	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No information available
Relative evaporation rate (ether=1)	: Not available
Melting point	: No information available
Freezing point	: No information available
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: No information available
Decomposition temperature	: Not available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: >= Not applicable
Relative vapor density at 20 °C	: Not applicable
Relative density	: 1.15 (H <sub>2</sub> O=1)
Relative density of saturated gas/air mixture	: No information available
Solubility	: Insoluble in water
Log Pow	: No information available
Log Kow	: No information available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: Explosive limits of toner particles suspended in air approximately equal to that of coal dust
Oxidizing properties	: No information available
Explosion limits	: No information available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

No information available.

### 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 oxidizing agents.

### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides.

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
LD <sub>50</sub> oral rat	> 2000 mg/kg (OECD 420 method)
LC <sub>50</sub> inhalation rat (mg/l)	> 5.08 mg/l/4h (The highest technically achievable concentration) (OECD 436 method)
Skin corrosion/irritation	: Non-irritant. (OECD 404 method) pH: Not applicable
Serious eye damage/irritation	: Mild irritant to the eye. (OECD 405 method) pH: Not applicable
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.
Additional information	Other ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Carbon Black (bound) (1333-86-4)</b>	
EC <sub>50</sub> Daphnia	> 5600 mg/l 24 h (Daphnia magna)

### 12.2. Persistence and degradability

Persistence and degradability No information available.

### 12.3. Bioaccumulative potential

Log Pow No information available  
Log Kow No information available

### 12.4. Mobility in soil

Ecology - soil No information available.

### 12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

### 12.6. Other adverse effects

Other adverse effects : No information available.

Product name: TN-820,TN-850,TN-880,TN-890,TN-3400,TN-3410,TN-3415,TN-3417,TN-3420,TN-3422,TN-3425,TN-3428,TN-3429,TN-3430,TN-3435,TN-3437,TN-3440,TN-3442,TN-3448,TN-3449,TN-3465, TN-3467,TN-3470,TN-3472,TN-3475,TN-3478,TN-3479,TN-3480,TN-3485,TN-3487,TN-3490, TN-3492,TN-3495,TN-3498,TN-3499,TN-3500,TN-3510,TN-3512,TN-3520,TN-4638 Toner

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : 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 in accordance with federal, state and local regulations.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / DOT / UN

### 14.1. UN number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (ADR/RID) : None  
Proper Shipping Name (IATA) : None  
Proper Shipping Name (IMDG) : None

### 14.3. Transport hazard class(es)

Not applicable

### 14.4. Packing group

Not applicable

### 14.5. Environmental hazards

Other information : None

### 14.6. Special precautions for user

Special transport precautions : None

#### 14.6.1. Overland transport

No additional information available

#### 14.6.2. Transport by sea

No additional information available

#### 14.6.3. Air transport

No additional information available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IBC code : Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions  
Contains no REACH candidate substance  
Contains no REACH Annex XIV substances.

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## 15.1.2. National regulations

Regional legislation

: EU:Not classified as dangerous for supply/use. (1999/45/EC)

USA: All chemical substances contained in this product are and had been listed on the TSCA Chemical Substances Inventory, and none is subject to any of the following TSCA requirements: section 4 test rules; proposed or final section 5(a)(2) significant new use rules; section 5(e) consent orders; section 8(a) preliminary assessment information rules; and section 8(d) health and safety data reporting rules.

Canada: WHMIS: Not applicable. (Manufactured article).

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

SECTION 3.

Data sources

: World Health Organization International Agency for Research on Cancer, IARC Monographs on the Evaluation on the Carcinogenic Risks to Humans, Volume 93

U.S. Department of labor, 29CFR Part 1910.

ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices

EU Commission Directive 2009/161/EU.

Abbreviations and acronyms

: IARC (International Agency for Research on Cancer)  
IATA (International Air Transport Association)  
IMDG (International Maritime Dangerous Goods Code)  
IOELV (Indicative Occupational Exposure Limit)  
REACH (Registration, Evaluation and Authorisation of Chemicals)  
WHMIS (Workplace Hazardous Material Information System (Canada))  
ACGIH (American Conference of Government Industrial Hygienists)  
DOT (Department Of Transportation (US))  
ICAO (International Civil Aviation Organization)  
NOHSC (National Occupational Health and Safety Commission (Australia))  
NTP (National Toxicology Program) (US)  
OSHA (Occupational Safety and Health Administration) (US)  
PEL (Permissible Exposure Limit)  
STEL (Short Term Exposure Limit)  
TLV (Threshold Limit Value) (ACGIH)  
TSCA (Toxic Substances Control Act) (US)  
TWA (Time Weighted Average).

Other information

: The information only relates to this specific 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).