

Revision Date: 05-Mar-2021

Issuing Date: 29-Mar-2010

Revision Number: 7

Product Name: TN-410, TN-420, TN-450, TN-2010, TN-2210, TN-2220, TN-2015, TN-2215, TN-2225, TN-2030, TN-2230, TN-2250, TN-2060, TN-2260, TN-2280, TN-2080, TN-2090, TN-2235, TN-2275 Toner

## 1. IDENTIFICATION

### Product identifier

**Product Name** TN-410, TN-420, TN-450, TN-2010, TN-2210, TN-2220, TN-2015, TN-2215, TN-2225, TN-2030, TN-2230, TN-2250, TN-2060, TN-2260, TN-2280, TN-2080, TN-2090, TN-2235, TN-2275 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 +1-800-424-9300 (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

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## 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

May be harmful in contact with skin

### **Unknown acute toxicity**

100 % of the mixture consists of ingredient(s) of unknown toxicity

96 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % 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
Polyester resin	**	**	*
N,N-diethyl-N-methyl-2-(2-methyl-1-oxo-2-propenyl)oxyethanaminium salt with 4-methylbenzenesulfonic acid (1:1) polymer with butyl 2-propenoate and ethenylbenzene	133350-42-2	5-10	*
Carbon Black (bound)	1333-86-4	2.5-5.5	*
Rosin, fumarated	65997-04-8	1-2.5	*

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

\*\* Trade secret

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## 4. FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	If symptoms persist, call a physician.
<b>Inhalation</b>	Get immediate medical advice/attention. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
<b>Eye contact</b>	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical advice/attention.
<b>Skin contact:</b>	Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	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

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

<b>Note to physicians</b>	Treat symptomatically.
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## 5. FIRE-FIGHTING MEASURES

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

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## 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.

Prevent entry into waterways, sewers, basements or confined areas.

### 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** Wipe up with absorbent towel Wash with water to remove remaining traces of ink.

**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 out of the reach of children. Keep cool. Protect from sunlight.

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## 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) 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable particulate matter	TWA: 3.5 mg/m <sup>3</sup> (vacated) TWA: 3.5 mg/m <sup>3</sup>	IDLH: 1750 mg/m <sup>3</sup> TWA: 3.5 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

### 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: Apron, Boots

#### Respiratory protection

Use appropriate respiratory protection.

#### 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

pH	No data available
Melting point / freezing point	No data available
Boiling point / boiling range	No data available

#### Remarks • Method

None known  
None known  
None known

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<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability limit:</b>	No data available	
<b>Lower flammability limit:</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	1.2	(H <sub>2</sub> O=1)
<b>Water solubility</b>	Insoluble in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>		None known
<b>Explosive properties</b>	No information available	Explosive limits of toner particles suspended in air approximately equal to that of coal dust.
<b>Oxidizing properties</b>	No information available	
<b><u>Other Information</u></b>		
<b>Softening point</b>	No information available	
<b>Molecular weight</b>	No information available	
<b>VOC Content (%)</b>	No information available	
<b>Liquid Density</b>	No information available	
<b>Bulk density</b>	No information available	

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	None.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Incompatible materials</b>	Strong oxidizing agents
<b>Hazardous decomposition products</b>	Carbon monoxide, Carbon dioxide (CO <sub>2</sub> ), Nitrogen oxides (NO <sub>x</sub> )

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## 11. TOXICOLOGICAL INFORMATION

### Product Information

<b>Inhalation</b>	Acute LC <sub>50</sub> (4-hr) > 2.2 mg/l † (The highest technically achievable concentration) (OECD 403 method) Acute LC <sub>50</sub> (1 hour) > 5.08 mg/l (This figure is calculated according to the United Nations Recommendations on the Transport of Dangerous Goods 2.6.2.2.4.2 and IATA DGR 3.6.1.5.3.1)
<b>Eye contact</b>	No information available
<b>Skin contact:</b>	No information available
<b>Ingestion</b>	Acute LD <sub>50</sub> > 5000 mg/kg † (OECD 423 method)

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

<b>ATEmix (dermal)</b>	3,003.00 mg/kg
<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 406 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. <b>Other ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA</b>
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.

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**Aspiration hazard** No information available.

**Potential health effects**  
 Eye : May cause slight irritation  
 Skin : Prolonged exposure may cause skin irritation  
 Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea  
 Inhalation : Not an expected route of exposure

† This assessment is based on information available on similar products

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Rosin, fumarated 65997-04-8	-	LC50: ≈3.2mg/L (96h, Brachydanio rerio)	-	-

**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.



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## 14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	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

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## 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.

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

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

### US State Regulations

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

## U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

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

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