

Revision Date: 28-May-2021

Issuing Date: 12-Sep-2013

Revision Number: 4.1

Product Name: TN-411Y, TN-413Y, TN-416Y, TN-419Y, TN-421Y, TN-423Y,  
TN-426Y, TN-431Y, TN-433Y, TN-436Y, TN-439Y, TN-441Y, TN-443Y, TN-446Y,  
TN-449Y, TN-451Y, TN-456Y, TN-459Y, TN-461Y, TN-466Y, TN-469Y, TN-471Y,  
TN-476Y, TN-491Y, TN-493Y, TN-499Y, TN-910Y Toner

Safety data sheet number: YT413-02

## 1. Identification

### Product identifier

**Product Name** TN-411Y, TN-413Y, TN-416Y, TN-419Y, TN-421Y, TN-423Y, TN-426Y, TN-431Y,  
TN-433Y, TN-436Y, TN-439Y, TN-441Y, TN-443Y, TN-446Y, TN-449Y, TN-451Y,  
TN-456Y, TN-459Y, TN-461Y, TN-466Y, TN-469Y, TN-471Y, TN-476Y, TN-491Y,  
TN-493Y, TN-499Y, TN-910Y Toner

### Other means of identification

**Safety data sheet number** YT413-02

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

**Recommended Use** These products are yellow 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.

**Uses advised against** No information available

### Details of manufacturer or importer

#### Manufacturer

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

#### Importer

Brother International (Aust.) Pty. Ltd.  
ACN 001 393 835 Unit 2/51 Eastern Creek Drive Eastern Creek, NSW 2766, Australia  
Telephone (for information): +61-2-9887-4344

### For further information, please contact

**Contact Point** Product Safety Department

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

### Emergency telephone number

**Emergency telephone number** CHEMTREC +61-290372994 (Australia)  
CHEMTREC +1-703-527-3887 (International)  
Poisons Information Center, New Zealand: 0800 764 766 (0800 POISON)

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## 2. Hazard(s) identification

### GHS Classification

Not classified

### Label elements

Not classified

### Hazard statements

Not classified

### Other hazards which do not result in classification

May be harmful if swallowed

**General Hazards** No information available

## 3. Composition/information on ingredients

### Substance

Not applicable

### Mixture

Chemical name	CAS No	Weight-%
Styrene-acrylate-copolymer	25767-47-9	75-90
Pigment	**	4-10
Fatty acid ester	**	3-10
Silicon dioxide (amorphous)	112945-52-5	1-3
PMMA	9011-14-7	1-3
Silicon dioxide (amorphous)	844491-94-7	<2
Styrene-acrylate Resin	**	0.1-1

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## 4. First-aid measures

### Description of first aid measures

<b>General advice</b>	If symptoms persist, call a physician.
<b>Emergency telephone number</b>	Poisons Information Center, Australia: 13 11 26 Poisons Information Center, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air. 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>	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
<b>Ingestion</b>	Rinse mouth immediately and drink plenty of water. Get immediate medical advice/attention.

### 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 Skin contact: : Repeated and/or prolonged skin contact may cause 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

### Suitable Extinguishing Media

<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , water spray or regular foam
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<b>Unsuitable extinguishing media</b>	Do not use water jet.
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**Specific hazards arising from the chemical** May form explosive dust clouds in air

### Special protective actions for fire-fighters

**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

**Environmental precautions** Do not flush into surface water or sanitary sewer system.

### 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

### Precautions to prevent secondary hazards

**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.

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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.

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

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep away from oxidizing agents.

Strong oxidizing agents

## 8. Exposure controls/personal protection

### Control parameters

#### Exposure Limits

### 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.

**Skin and body protection** If there is a risk of contact: Apron, Boots

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

**Respiratory protection** Use appropriate respiratory protection.

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

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## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state	Powder
Appearance	No information available
Color	yellow
Odor	Odorless.
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	None known
pH (as aqueous solution)	Not applicable	
Melting point / freezing point	No data available	None known
Boiling point / boiling range	Not applicable	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	Not applicable	None known
Dynamic viscosity	Not applicable	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	
<u>Other Information</u>		
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

### Reactivity

**Reactivity** No information available.

### Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### Conditions to avoid

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

### Incompatible materials

**Incompatible materials** Strong oxidizing agents.

### Hazardous decomposition products

**Hazardous decomposition products** Carbon oxides, Nitrogen oxides (NOx)

## 11. Toxicological information

### Acute toxicity

### Information on likely routes of exposure

#### Product Information

**Inhalation** Acute LC<sub>50</sub> > 5.25 mg/l/4h (OECD 436 method)

**Eye contact** No information available

**Skin contact:** No information available

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**Ingestion** Acute LD<sub>50</sub> > 2000 mg/kg (OECD 420 method)

**Symptoms** No information available.

**Numerical measures of toxicity - Product Information**

No information available

**Unknown acute toxicity**

97.5 % of the mixture consists of ingredient(s) of unknown toxicity

97.5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

97.5 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

97.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

97.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

97.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Silicon dioxide (amorphous)	= 3160 mg/kg ( Rat )	-	-

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

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

**Serious eye damage/eye irritation** Minimal 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** Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

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## 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 Over exposure may cause respiratory irritation.

## 12. Ecological information

### Ecotoxicity

#### Ecotoxicity

The environmental impact of this product has not been fully investigated

#### Unknown aquatic toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

### Persistence and degradability

#### Persistence and degradability

No information available.

### Bioaccumulative potential

#### Bioaccumulation

No information available.

### Mobility

#### Mobility in soil

No information available.

### Other adverse effects

#### 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

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

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

Not applicable

## 15. Regulatory information

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

#### National Regulations

##### Australia

See section 8 for national exposure control parameters

##### **Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)**

No poisons schedule number allocated

#### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</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/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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**International Regulations**

**Ozone-depleting substances (ODS)** Not applicable

**Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**16. Other information**

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**Revision Note**

SDS sections updated : 1

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

**Legend SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	**	Trade secret
C	Carcinogen		

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

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## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**