

SAFETY DATA SHEETS

This SDS packet was issued with item:

070308080

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070308072

SAFETY DATA SHEET

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

Version Number: 5
SDS No.: PT481-01-EUUSOTHER

1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE SUPPLIER'S UNDERTAKING

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

Material Identification: PT481

Use: 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.

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
100 Somerset Corporate Boulevard, P.O. Box 6911, Bridgewater, NJ 08807-0911, USA
Telephone (for information): +1-800-284-4329

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

Emergency Phone No.: CHEMTREC
+1-703-527-3887 (International)
+1-800-424-9300 (North America)

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

E-mail address for information: sds.info@brother.co.jp

2. HAZARDS IDENTIFICATION

Potential health effects from overexposure: Routes of exposure: skin contact, eye contact, inhalation (Dust).
Minimal respiratory tract irritation may occur as with large amounts of any non-toxic dust. Thermal decomposition will evolve toxic and irritant vapors.

Combustion products: See Section: 10.

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Version Number: 5
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Potential Health Effects:

Routes of exposure:
skin contact, eye contact, inhalation (Dust).

Inhalation (Dust). For large quantities:
May cause irritation to the respiratory system.
Effects and Symptoms - Increased difficulty in breathing. Sneezing. Coughing.
Use this product as intended in order to prevent the dust leakage that leads to exposure.

Skin Contact:
No specific effects and/or symptoms have been reported or known.

Eye Contact:
May cause eye irritation. Use this product as intended in order to prevent the dust leakage that leads to exposure.

Ingestion:
May cause stomach ache. Unlikely route of exposure.

Special Hazards:

May form explosible dust clouds in air.

EU Classification:

Not classified as hazardous according to EU Directive 1999/45/EC.

Australia Classification:

Not classified as hazardous according to the criteria of NOHSC.

4. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Styrene-acrylate Toner (Mixture).

Chemical Name	CAS No.	EC No.	%W/W	EU Hazard Symbols	EU Risk Phrases
Styrene-acrylate copolymer	25767-47-9	Not applicable.	84 - 87	Not classified.	Not classified.
Carbon Black (bound)	1333-86-4	215-609-9	5 - 7	Not classified.	Not classified.
Fatty Acid Ester	Confidential	Not applicable.	4 - 5	Not classified.	Not classified.
PMMA	9011-14-7	Not applicable.	1 - 3	Not classified.	Not classified.
Styrene-acrylic resin	Confidential	Not applicable.	1 - 2	Not classified.	Not classified.
Silicon Dioxide (amorphous)	844491-94-7	430-570-1	< 1	Not classified.	Not classified.
Silicon Dioxide (amorphous)	7631-86-9	231-545-4	< 1	Not classified.	Not classified.

5. FIRST AID MEASURES

General: If symptoms persist, obtain medical attention.

Inhalation: Obtain immediate medical attention. In case of accident by inhalation remove casualty to fresh air and keep at rest.

Skin Contact: Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.

Eye Contact: Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.

Ingestion: Obtain immediate medical attention. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

6. FIRE FIGHTING MEASURES

Extinguishing Media: Extinguish preferably with dry chemical, Carbon dioxide, Water spray, Foam.

Unsuitable Extinguishing Media: Do not use water jet.

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Special firefighting procedures: 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.

Unusual fire and explosion hazards: May form explosible dust clouds in air. Combustion products: See Section: 10.

Explosion limits: Lower = 40 g/m³

6 ACCIDENTAL RELEASE MEASURES

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

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

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 clean-up. 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.

DISPOSAL CONSIDERATIONS - See Section: 13.

7 HANDLING AND STORAGE

Handling: Keep out of the reach of children. Avoid dust generation. Avoid inhalation of high concentrations of dust. Avoid contact with eyes.

Storage: Keep out of the reach of children. Keep away from oxidizing agents.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

SUBSTANCE	CAS No.	OSHA PEL	ACGIH TLV	EU IOELV
Carbon Black	1333-86-4	3.5 mg/m ³ TWA	3.5 mg/m ³ TWA	None.
Silicon Dioxide (amorphous)	844491-94-7	20mppcf 80(mg/m ³)/%SiO ₂	None.	None.
Silicon Dioxide (amorphous)	7631-86-9	20mppcf 80(mg/m ³)/%SiO ₂	None.	None.

Additional Information: USA OSHA PEL (TWA): 15 mg/m³ (Total Dust) 5mg/m³ (Respirable Fraction).
ACGIH TLV (TWA): 10 mg/m³ (Inhalable particles) 3 mg/m³ (Respirable particles).

Environmental Exposure Controls: Not normally required.

Ventilation: Good general ventilation should be sufficient under normal use.

Personal Protection: 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: Goggles.
Skin: Protective gloves.
Respirators: Dust mask. (Large spillages: Respirator).

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Product Name
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9. PHYSICAL AND CHEMICAL PROPERTIES

pH (Value):	Not applicable.
Form:	Powder.
Color:	Black.
Odor:	Odorless.
Boiling Point (°C):	Not applicable.
Melting Point (°C):	110 (Softening Point (°C)).
Vapor Pressure (Pascal):	Not applicable.
Specific Gravity:	1.15 (H ₂ O=1).
Viscosity (mPa.s):	Not applicable.
Flash Point (°C):	Not applicable.
Explosive Properties:	Explosion limits lower - 40 g/m ³ .
Flammable Powder Class:	No data.
Vapor Density (Air=1):	Not applicable.
Partition Coefficient (n-Octanol/water):	No data.
Relative Evaporation Rate (Butyl Acetate=1):	Not applicable.
Oxidizing Properties:	No data.
Solubility (Water):	Negligible.
Solubility (Other):	No data.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable.
Conditions to avoid:	Keep at temperature not exceeding: 200 °C. Avoid friction, sparks, or other means of ignition.
Materials to avoid:	Strong oxidizing agents.
Hazardous Decomposition Product(s):	Contains: Carbon monoxide, Carbon dioxide and Nitrogen oxides.
Hazardous polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Ingestion:	Acute LD ₅₀ > 2000mg/kg (Method: OECD#420)
Inhalation:	Acute LC ₅₀ > 5.30mg/l (Method: OECD#403)
Skin Contact:	Non-irritant. (Method: OECD#404)
Eye Contact:	Slight irritant to the eye. (Method: OECD#405)
Mutagenicity:	Negative. (Method: OECD#471 / Ames test)
Skin sensitization:	It is not a skin sensitizer. (Method: OECD#429)
Carbon Black:	<p>Carcinogenicity Information.</p> <p>In 1996, the IARC reevaluated 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.</p> <p>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.</p> <p>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.</p>

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

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12. ECOLOGICAL INFORMATION

No data available on the adverse effects of this product on the environment.

Toxicity: No data.

Environmental Fate and Distribution: No data.

Persistence and Degradation: No data.

13. DISPOSAL CONSIDERATIONS

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 compliance with Federal, State and local regulations.

14. TRANSPORT INFORMATION

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

UN No.: None.

Class: None.

Not regulated under DOT, IMDG, ADR, RID, IATA.

15. REGULATORY INFORMATION

USA: All chemicals in this product comply with TSCA rules and regulations including TSCA Section 5 (Inventory Rules).

EU: Not classified as dangerous for supply/use. (1999/45/EC, 67/548/EEC)
Hazard Symbol, Risk Phrases, Safety Phrases: None assigned.

Canada: WHMIS: Not applicable. (Manufactured article)

16. OTHER INFORMATION

The following sections contain revisions or new statements: All sections.

Additional Information: 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).

Reference:

- U.S. 29CFR Part 1910
- ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
- EU Directive 91/322/EEC and 2000/39/EC
- IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans World Health Organization
- NTP 11th Report on Carcinogens

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Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International carriage of Dangerous goods by Road (EU)
DOT: Department Of Transportation (US)
EINECS: European Inventory of Existing Commercial Chemical Substances
HCS: Hazard Communication Standard (US)
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods
IOELV: Indicative Occupational Exposure Limit Value
NOHSC: National Occupational Health and Safety Commission (Australia)
NTP: National Toxicology Program (US)
OSHA: Occupational Safety and Health Administration (US)
PEL: Permissible Exposure Limit
RID: Regulations concerning the International carriage of goods by Rail (EU)
TLV: Threshold Limit Value (ACGIH)
TSCA: Toxic Substances Control Act (US)
WHMIS: Workplace Hazardous Material Information System (Canada)

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

Issuing Date: 24-November-2008
Revision Date: 01-November-2015
Version: 7
SDS No: PT481-01-EUUSOTHER

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

1.1 Product identifier

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

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

Relevant Identified Use(s) 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.

1.3 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 Telephone (24 hours) CHEMTREC
+1-703-527-3887 (International)
+1-800-424-9300 (North America)

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

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

Issuing Date: 24-November-2008
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Not classified as hazardous

Classification according to Directive 1999/45/EC

Not classified as hazardous

Australia Classification

Not classified as hazardous according to the criteria of NOHSC

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms

None

Signal Word

None

Hazard Statements

None

Precautionary statements

None

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

3.2 Mixtures

Description of the mixture: Styrene-acrylate Toner (Mixture).

Chemical Name	CAS-No	EC-No	w/w%	Classification (EU Reg. 1272/2008)
Styrene-acrylate copolymer	25767-47-9	-	84-87	Not classified
Carbon Black (bound)	1333-86-4	215-609-9	5-7	Not classified
Fatty Acid Ester	**	-	4-5	Not classified
PMMA	9011-14-7	-	1-3	Not classified
Styrene-acrylate Resin	**	-	1-2	Not classified
Silicon Dioxide (amorphous)	844491-94-7	430-570-1	<1	Not classified
Silicon Dioxide (amorphous)	7631-86-9	231-545-4	<1	Not classified

For the full text of R-phrases and H-Statements see Section 16

** CONFIDENTIAL

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

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SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	If symptoms persist, obtain medical attention.
Inhalation	Obtain immediate medical attention. In case of accident by inhalation remove casualty to fresh air and keep at rest.
Skin contact	Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.
Eye contact	Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.
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

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.

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.

5.2 Special hazards arising from the substance or mixture

May form explosible dust clouds in air.

5.3 Advice for firefighters

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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SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and 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 materials for containment and 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** For personal protection: See section 8.
For disposal considerations: See section 13.

SECTION 7: Handling and storage

- 7.1 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** 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

Occupational Exposure Limits

Chemical Name	Carbon Black (bound) 1333-86-4
ACGIH TLV	TWA: 3 mg/m ³ inhalable fraction
OSHA PEL	TWA: 3.5 mg/m ³
European Union	-
The United Kingdom	STEL: 7 mg/m ³ TWA: 3.5 mg/m ³
France	TWA: 3.5 mg/m ³
Spain	TWA: 3.5 mg/m ³
Germany	Carc
Portugal	TWA: 3.5 mg/m ³
Finland	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³
Denmark	TWA: 3.5 mg/m ³
Poland	TWA: 4.0 mg/m ³
Norway	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³
Ireland	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³
Chemical Name	Silicon Dioxide (amorphous) 844491-94-7
ACGIH TLV	-
OSHA PEL	20mppcf 80(mg/m ³)/%SiO ₂

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European Union	-
Chemical Name	Silicon Dioxide (amorphous) 7631-86-9
ACGIH TLV	-
OSHA PEL	20mppcf 80(mg/m ³)/%SiO ₂
European Union	-
The United Kingdom	STEL: 18 mg/m ³ STEL: 7.2 mg/m ³ TWA: 6 mg/m ³ TWA: 2.4 mg/m ³
Germany	TWA: 4 mg/m ³
Austria	TWA: 4 mg/m ³ TWA: 0.3 mg/m ³
Switzerland	TWA: 4 mg/m ³ TWA: 0.3 mg/m ³
Norway	TWA: 1.5 mg/m ³ STEL: 3 mg/m ³
Ireland	TWA: 6 mg/m ³ TWA: 2.4 mg/m ³

Additional information

USA OSHA PEL (TWA): 15 mg/m³ (Total Dust) 5mg/m³ (Respirable Fraction).
ACGIH TLV (TWA): 10 mg/m³ (Inhalable particles) 3 mg/m³ (Respirable particles)

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 Protection	Safety goggles.
Hand Protection	Protective gloves.
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.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Powder
Color	Black
Odor	Odorless
Odor Threshold	No information available
pH	Not applicable
Melting point/freezing point	110 °C (Melting point)
Initial boiling point and boiling range	Not applicable
Flash Point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	85 - 90 g/m ³ (lower)
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	1.15 (H ₂ O)
Solubility(ies)	Insoluble (water)
Partition coefficient: n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	Not applicable
Explosive properties	Explosive limits of toner particles suspended in air approximately equal to that of coal dust.
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.
10.3 Possibility of hazardous reactions	No information available.
10.4 Conditions to avoid	Keep at a 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	Contains: Carbon monoxide, Carbon dioxide and Nitrogen oxides.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation Acute LC₅₀ > 5.30 mg/l (Method OECD#403)
Eye contact No information available.
Skin contact No information available.
Ingestion Acute LD₅₀ > 2000 mg/kg (Method OECD#420)

Skin corrosion/irritation Non-irritant. (Method: OECD#404)

Serious eye damage/irritation Slight irritant to the eye (Method: OECD#405)

Respiratory or skin sensitisation It is not a skin sensitizer. (Method: OECD#429)

Mutagenicity Ames test: Negative. (Method: OECD#471)

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.

SECTION 12: Ecological information

12.1 Toxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Carbon Black (bound) 1333-86-4			EC ₅₀ : >5600 mg/L 24 h (Daphnia magna)
Silicon Dioxide (amorphous) 7631-86-9	EC ₅₀ : 440 mg/L 72 h (Pseudokirchneriella subcapitata)	LC ₅₀ : 5000 mg/L 96 h static (Brachydanio rerio)	EC ₅₀ : 7600 mg/L 48 h (Ceriodaphnia dubia)

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).

12.6 Other adverse effects No information available.

Product name: TN-3230, TN-3280, TN-620, TN-650, TN-3250,
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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

Not classified according to the United Nations "Recommendations on the Transport of Dangerous Goods"

- | | |
|--------------------------------------------------------------------------------------|----------------|
| 14.1 UN Number | None |
| 14.2 UN proper shipping name | None |
| 14.3 Transport hazard class(es) | None |
| 14.4 Packing Group | None |
| 14.5 Environmental hazards | None |
| 14.6 Special precautions for user | None |
| 14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code | Not applicable |

Not regulated under DOT, IMDG, ADR, RID, IATA.

SECTION 15: Regulatory information

- | | |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture | <p>EU:Not classified as dangerous for supply/use. (1999/45/EC)</p> <p>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.</p> <p>Canada: WHMIS: Not applicable. (Manufactured article)</p> |
| 15.2 Chemical Safety Assessment | No. |

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

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SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3 None

Full text of H-Statements referred to under sections 2 and 3 None

Additional information 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).

Revision Note SECTION 3

References: U.S. 29CFR Part 1910
ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans World Health Organization
EU Directive 91/322/EEC and 2000/39/EC
NTP 11th Report on Carcinogens

Abbreviations: ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International carriage of Dangerous goods by Road (EU)
DOT: Department Of Transportation (US)
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods
NOHSC: National Occupational Health and Safety Commission (Australia)
NTP: National Toxicology Program (US)
OSHA: Occupational Safety and Health Administration (US)
PEL: Permissible Exposure Limit
RID: Regulations concerning the International carriage of goods by Rail (EU)
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value (ACGIH)
TSCA: Toxic Substances Control Act (US)
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Material Information System (Canada)