

Report No.: NTS1886182M

Date: April 23, 2023

MSDS REPORT

This report is limited to the above applicant company and the product model only.

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Product Name: Toner (Brother)

Establishment / Revision: April 23, 2023

MATERIAL SAFETY DATA SHEET

(according to ISO 11014: 2009)

SECTION 1: Identification of Product and Supplier

1.1 Product identifiers

Product Name: Toner

Sample Model No.: Brother TN2420

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

Identified uses: For electrostatic imaging printer, copier

SECTION 2: Hazards Identification

Emergency Overview: Black fine powder, slight plastic odor.

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 GHS Label elements, including precautionary statements

This substance is not classified as dangerous according to Directive 67/548/EEC.

Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

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2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**SECTION 3: Composition / Information on Ingredients****3.1 Substance or preparation :Preparation****3.2 Information about the chemical nature of product :**

Common chemical name / General name	CAS number	Concentration / Concentration	Classification and hazard labeling
Styrene acrylic resin	25767-47-9	80-92%	Health: 1 Flammability: 2 Reactivity: 0
Carbon black (C)	1333-86-4	2-4%	Health: 2 Flammability: 2 Reactivity: 0
Polypropylene Wax	9003-07-0	1-3%	Health: 1 Flammability: 1 Reactivity: 0
Silicon Dioxide (SiO ₂)	7631-86-9	1%	Health: 1 Flammability: 0 Reactivity: 0

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation : If breathed in, move person into fresh air.
If not breathing, give artificial respiration.
Consult a physician.

Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes .
Seek medical attention.

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- Skin contact :** Wash off with soap and plenty of water.
Consult a physician.
- Ingestion:** Never give anything by mouth to an unconscious person.
Rinse mouth with water.
Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture :

Carbon oxides

5.3 Advice for firefighters :

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information :

No data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions:

Avoid breathing vapours, mist or gas.

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach sewage system or water bodies.

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Do not allow to enter the ground/soil.

6.3 Methods for cleaning up and disposal:

Sweep slowly spilled powder on to paper, and carefully transfer into a waste container. Clean remainder with wet paper, wet cloth or a vacuum cleaner.

If a vacuum cleaner is used, it must rate as a dust explosion-proof type. Fine powder can form explosive dust-air mixtures.

6.4 Reference to other sections:

For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

Use with adequate ventilation.

Avoid creating dusty conditions and prevent wind dispersal.

Provide appropriate exhaust ventilation at places where dust is formed.

Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place.

Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters:

	USA OSHA PEL	ACGIH TLV	EU OEL
Product (Toner)	PNOR: TWA 15 mg/m ³ (Total dust), TWA 5 mg/m ³ (Respirable fraction)	PNOS: TWA 10 mg/m ³ (Inhalable fraction), TWA 3 mg/m ³ (Respirable fraction)	Not established

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Silicon Dioxide (SiO ₂)	20 mppcf, 80 (mg/m ³)/% SiO ₂	Not established	Not established
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8.2 Exposure controls:

Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and at the end of workday.

Personal protective equipment:

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Fluorinated rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 32 min

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Working clothes. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls:

No special environmental precautions required.

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SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

- | | |
|---|--|
| a). Appearance: | Black fine powder |
| b). Color: | Black |
| c). Odour: | Slight plastic odor |
| d). pH: | no data available |
| e). Melting Point/Freezing Point (°C): | Softening temperature (DIN EN ISO 306): 100-150°C |
| f). Boiling point/ range: | Not applicable |
| g). Flash point: | Not applicable |
| h). Flammability: | Flammability 1 |
| i). Upper/Lower Flammable or
Explosive Limits: | Not applicable |
| j). Vapor Pressure: | Not applicable |
| k). Vapor Density: | Not applicable |
| l). Density (at 20°C): | 1.4 to 1.8 g/cm ³ at 25 °C |
| m). Water solubility: | Negligible |
| n). Fat Solubility: | Partially soluble in toluene and xylene. |
| o). Partition Coefficient
(n-Octanol/Water): | Not applicable |
| p). Auto-ignition Temperature (°C): | Not applicable |
| q). Decomposition Temperature (°C): | > 200°C |
| r). Viscosity (mPa s): | Not applicable |
| s). Explosive properties: | Can form explosive dust-air mixtures when finely dispersed in air. |
| t). Oxidizing properties: | Not applicable |

9.2 Other safety information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: No data available

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10.2 Chemical Stability: Stable under recommended storage and handling conditions

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid:

Temperatures over 200°C will lead to resin degradation and decomposition.

Keep away from heat, sparks and flame and exposure to (sun) light.

Prevent formation of dust clouds.

Take measures against static discharge.

Avoid storage or contact with strong oxidizing agents

10.5 Incompatible materials: Strong Oxidizing agents.

10.6 Hazardous decomposition products:

Other decomposition products - No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

- LD₅₀, oral, rat (mg.kg₁): LD50 > 2000 mg/kg
- LD₅₀, oral, mouse (mg.kg₁): Not Available
- LD₅₀, dermal (mg.kg₁): Not Available

Skin corrosion/irritation:

Skin - Rabbit

Result: No skin irritation

Respiratory or skin sensitization:no data available

Germ cell mutagenicity:no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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Repeated Dose Toxicity:

Reported pulmonary response upon chronic inhalation exposure in rats to a toner enriched in respirable-sized particles compared to commercial toner. No pulmonary change was found at 1 mg/m which is most relevant to potential human exposure.

A minimal to mild degree of fibrosis was noted in 22% of the animals at 4 mg/m, and a mild to moderate degree of fibrosis was observed in 92% of the animals at 16 mg/m

These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lung for a prolonged interval.

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information: RTECS: No data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May causes skin irritation.

Eyes Causes eye irritation.

Signs and Symptoms of Exposure:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological Information

12.1 Toxicity: Fish, 96h LL50 > 1000 mg/l (WAF)
Crustaceans, 48h EL50 > 1000 mg/l (WAF)
Algae, ErL50 (0-72h) > 1000 mg/l (WAF)

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: no data available

12.5 Results of PBT and vPvB assessment:

No results that the component(s) of this toner meet(s) the PBT or vPvB criteria under Regulation (EC) No 1907/2006.

12.6 Other adverse effects : no data available

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SECTION 13: Waste handling

Disposal of product:

DO NOT put toner or toner container into fire; heated toner may cause severe burns.

DO NOT shred a toner container, unless dust-explosion preventing measures are taken.

Finely dispersed particles form explosive mixtures in air.

Waste must be disposed of in accordance with national and local environmental regulations.

Contaminated packaging

Polyethylene bags should be reused in the working area, products transportation or recycled by specialized companies.

SECTION 14: Transport Information

14.1 UN number

ADR/RID: --

IMDG: --

IATA: --

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: --

IMDG: --

IATA: --

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine Pollutant: no

IATA: no

14.6 Special precautions for user

no data available

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SECTION 15: Regulation Information

Law Information:

OSHA hazard communication standard: No specific regulations. The Hazard Communication Standard of the Occupational Safety and Health Administration, 29 CFR 1910.1200 considers components of this product a Hazardous Substance.

Toxic Substances Control Act (TSCA) Status Components of these products are listed on the TSCA Chemical Substance Inventory of Existing Chemical Substances.

SARA TITLE III: no hazardous substances, above one (1) percent, and are subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know act of 1986 and 40CFR372.

California prop. 65: This product not contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm.

WHMIS (Canada): CLASS D-2A

US Department of Transportation DOT
EU Directive 1907/2006/EC

In accordance with all Federal, State and Local laws.

SECTION 16: Other Information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
For total product, can be classified as below:

<u>NFPA</u>	Health hazards 0	Flammability 0	Instability 0	Physical & Chemical Properties 0
<u>HMIS</u>	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X

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

- International Air Transport Association (IATA)
- Globally Harmonized System (GHS)
- International Maritime Dangerous Goods (IMDG)

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Revision Note:

The information contained in this Safety data sheet is based on the present state of knowledge and current legislation.

Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use.

This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

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