Product Name
TN-6000 Series Toner

Date of last issue: May 14, 2007
Version number: 1

## Section 1 – Identification of Substance/Preparation and of the Company/Undertaking

Product name: TN-6300 Toner, TN-6600 Toner

Material name: ZEOGLOBULE PT462

Use of Product: These products are black toner in a cartridge for Brother Industries, Ltd. laser printers, multifunction devices and fax receivers.
The cartridge prevents the toner from spilling in normal use.

Manufacturer: Brother Industries, Ltd.
Printing and Solutions Company
1-1-1, Kawagishi, Mizuho-ku, Nagoya 467-8562, Japan
Telephone (for information): +81-52-824-2735

Importer in Europe: Brother International Europe Ltd.
Brother House, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK
Telephone (for information): +44-161-330-6531

We do not provide 24 hour cover for information contact.
Please telephone to the above office appropriate to you during our business hours.

MSDS Number: ZLET_EU001

## Section 2 - Composition / information on ingredients

Chemical name: Styrene-acrylate Toner (Mixture)

Ingredients:

| Component/ Substance | CAS Number | EC Number | Classification according to 67/548/EEC | %Wt. |
|---|---|---|---|---|
| Styrene-acrylate Copolymer | Registered | -- | Not classified | 80-90 |
| Carbon Black (bound) | 1333-86-4 | 215-609-9 | Not classified | 5-7 |
| Fatty Acid Ester | Registered | -- | Not classified | 4-6 |
| Silicon Dioxide (amorphous) | 7631-86-9 | 231-545-4 | Not classified | 1-3 |
| PMMA | 9011-14-7 | -- | Not classified | <1 |

## Section 3 - Hazards identification

EC Classification:

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

Potential Health Effect:

Routes of exposure:

Possible routes of entry include skin/eye contact and dust inhalation.

Skin contact:

No symptoms will appear.

Eye contact:

Eye irritation will be caused. Use this product as intended in order to prevent the dust leakage that leads to eye contact.

Particulate inhalation:

Exposure to large amount of dust will cause lung irritation, difficult breathing, sneezing and/or coughing. Use this product as intended in order to prevent the dust leakage that leads to dust inhalation.

Ingestion:

Stomach irritation will be caused. It is highly unlikely that ingestion occurs under intended use.

## Section 4 - First aid measures

If irritation occurs or persists from any route of exposure, remove the affected individual from the area and seek medical assistance.

Eye contact:

Flush eyes with running water for 15 minutes with eyelids open. Consult an eye-doctor.

Skin contact:

Remove contaminated clothes and wash skin with soap and water.

Particulate inhalation:

Remove the sufferer to flesh air and seek medical assistance immediately.

Ingestion:

Seek medical assistance immediately.

## Section 5 - Fire fighting measures

Extinguishing media:

Dry chemicals, $CO_2$, water spray or foam are recommended medial.

Special firefighting procedures:

Do not use straight water, high-pressure water or water stream 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:

Thermal decomposition of organic components may result in occurrence of oxides of carbon. Special precautions must be taken if (like most organic materials in powder form) it can form explosive mixtures when dispersed in air. Toxic gasses may be formed upon combustion and represents a hazard to firefighters. See Section 10 for additional information on combustion products.

Explosion limits: Lower = 40 g/$m^3$

## Section 6 - Accidental release measures

Personal precautions:

Minimize generation of toner dust. Avoid inhalation of the dust.

Environmental precautions:

Prevent from entering into the surface water or sewerage system.

Method of cleaning up:

Sweep the spilt toner or remove it with a vacuum cleaner, and transfer into the sealed container carefully. Sweep slowly to minimize generation of dust during clean-up. If the vacuum cleaner is used, the motor must be rated as dust explosion-proof. A conductive hose bonded to the machine should be used to reduce static build-up. Residue can be removed with soap and cold water. Clothes may be washed or dry cleaned after removal of loose toner.
See section 13 for disposal considerations.

## Section 7 - Handling and storage

Handling:

Keep out of the reach of children. In case of accidental spill, try not to disperse the particles. Avoid prolonged inhalation of excessive dust and contact eyes. Use with adequate ventilation. Use the mask, which recommended preventing dust and coarse particulate.

Storage:

Keep out of the reach of children. Keep container tightly closed. Keep away from contact with oxidizing materials. Store in a cool and dry place away from direct light to maintain quality.

## Section 8 - Exposure controls / personal protection

Exposure limit value:

| Ingredients | CAS Number | Workplace exposure limit (UK, basis: EH40/2005 ) | |
|---|---|---|---|
| | | Long-term exposure limit (8-hour TWA reference period) | Short-term exposure limit (15-minute TWA reference period) |
| Carbon black | 1333-86-4 | 3.5 $mg.m^{-3}$ | 7 $mg.m^{-3}$ |
| Silicon Dioxide (amorphous) | 7631-86-9 | 6 $mg.m^{-3}$ (inhalable dust)<br>2.4 $mg.m^{-3}$ (respirable dust) | -- |

Ventilation:

Good general ventilation should be sufficient under normal use.

Personal protective equipment:

Not required under intended use. For use other than in normal operating procedures (such as in the event of large spill), the following should be applied:

Eye/face: Safety goggles

Skin: Protective gloves recommended

Respiratory: Dust mask (Respirator for large spill)

## Section 9 - Physical and chemical properties

| | |
|---|---|
| Appearance and odor: | Black powder and odorless |
| pH: | Not applicable |
| Boiling point/range: | Not applicable |
| Melting point/range: | 120 C (softening point) |
| Decomposition temperature: | No data available |
| Flash point: | Not applicable |
| Auto-ignition temperature: | No data available |
| Flammable (explosive) limits: | Not applicable |
| Explosion properties: | No data available |
| Oxidizing properties: | No data available |
| Vapor pressure: | Not applicable |
| Specific Gravity ($H_2O$=1): | 1.15 |
| Solubility in water: | Negligible |

## Section 10 - Stability and reactivity

| | |
|---|---|
| Stability: | Stable |
| Hazardous polymerization: | Will not occur |
| Conditions to avoid: | Overheating (do not expose to temperature above 200 C) and contact with ignition sources such as open flames, sparks, electrical arcs and static discharge sources. |
| Materials to avoid: | Avoid exposure to strong oxidizers or reducing agents. |
| Hazardous decomposition products: | The gas generated by heat decomposition may contain carbon monoxide, carbon dioxide and Nitrogen. |

## Section 11 - Toxicological information

Products

| | |
|---|---|
| Acute oral toxicity: | $LD_{50}$ >2000mg/kg (rat) |
| Acute inhalation toxicity: | $LC_{50}$ > 5 mg/l (rat) |
| Skin irritation: | Non-irritant (rabbit) |
| Eye irritation: | Very slight irritant (rabbit) |
| Mutagenicity: | Negative (Ames test) |

Carbon black

Carcinogenicity:

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. 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.

## Section 12 - Ecological information

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

| | |
|---|---|
| Mobility: | No data available |
| Persistence and degradability: | No data available |
| Bioaccumulation: | No data available |
| Ecotoxicity: | No data available |

## Section 13 - Disposal considerations

Dispose of in compliance with Federal, State and local regulations.

This material is not a hazardous waste per Federal Regulation 40 CFR 261 when disposed.
Consult with the appropriate State and Local Waste Authorities for additional information.
Incinerate only in a closed container.

## Section 14 - Transportation information

U.N. Recommendations on the Transport of Dangerous Goods: Not applicable

| | |
|---|---|
| U.N. Number: | None |
| U.N. Classification: | None. |

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

* *DOT: U.S. Department of Transportation*
* *IMDG: International Maritime Dangerous Goods*
* *ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.*
* *RID: International regulations concerning the international carriage of dangerous goods by rail*

* *IATA: International Air Transport Association*

## Section 15 - Regulatory information

| | | |
|---|---|---|
| Inventories: | JCSCL (Japan) | Yes |
| | TSCA (USA) | Yes |
| | EINECS/ELINCS (EU) | Yes |

Information on the label (according to 1999/45/EC and 67/548/EEC
Symbol, R-Phrase, S-Phrase: Not required.

## Section 16 - Other information

Hazard rating system classification

| | NFPA | HMIS | Key: 0-least; 1-slight; 2-moderate; 3-high; 4-extreme |
|---|---|---|---|
| Health | 1 | 1 | **N**ational **F**ire **P**rotection **A**ssociation rating identifies hazards during a fire emergency. **H**azardous **M**aterials **I**dentification **S**ystem rating applies to products as packaged. |
| Flammability | 1 | 1 | |
| Reactivity | 0 | 0 | |

This document is based on our knowledge at the time of preparation. While Brother Industries, Ltd. believes that the data contained herein are accurate, many of the data have been derived from outside sources and we cannot assume any liability as to the accuracy of the data. They are offered solely for your information.

This document covers only normal conditions of use and handling. When using product under unintended conditions, user is responsible to examine proper precautions for any particular use.