2. COMPOSITION/INFORMATION ON INGREDIENTS

Information on Ingredients:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS Number</th>
<th>% in mixture</th>
<th>TSCA listed/exempted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene acrylate copolymer</td>
<td>Trade secret</td>
<td>70-90</td>
<td>Yes</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>3-10</td>
<td>Yes</td>
</tr>
<tr>
<td>Wax</td>
<td>Trade secret</td>
<td>5-15</td>
<td>Yes</td>
</tr>
<tr>
<td>Amorphous silica</td>
<td>Trade secret</td>
<td>&lt;5</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Refer to Section 8 for the exposure limits and Section 11 for toxicological Information.

3. HAZARDS IDENTIFICATION

Emergency overview
This mixture is fine black powder with no or slight plastic-like odor.
This mixture may cause irritation of the respiratory system, eyes and skin.
This mixture, like most organic powders, can cause a dust explosion if particles form thick clouds.

Acute health effects

Eye contact: Irritation may occur by mechanical abrasion.
Skin contact: Minimal skin irritation may occur.
Inhalation: Slight irritation of respiratory tract may occur with exposure to large amount of toner dust.
Ingestion: Ingestion is an unlikely route of entry under normal conditions of use.
Carcinogenicity
Carbon black is listed by IARC as a group 2B (possibly carcinogenic to human), but this classification is based on rat "lung particulate overload" studies. IARC monograph vol. 93 states that no significant exposure to carbon black is thought to occur during the use of products in which carbon black is bound to other materials, such as rubber, printing ink or paint. Carbon black in this mixture is in a bound form.

Other information
This mixture is not classified as hazardous according to the latest adaptations of EU Directive 1999/45/EC.

4. FIRST AID MEASURES
Immediate medical attention may be required in the unlikely event of extreme inhalation, eye contact or unusual reaction due to physical idiosyncrasy of the person.

Inhalation: Provide fresh air immediately. If symptoms occur, seek medical advice.

Skin contact: Wash out particles with plenty of water and soap. If irritation develops, seek medical advice.

Eye Contact: Do not rub eyes. Immediately rinse with plenty of clean running water until particles are washed out. If irritation persists, seek medical advice.

Ingestion: Clean mouth out with water. Drink several glasses of water. If sickness develops, seek medical advice.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide, water, foam, dry chemical

Extinguishing media which Shall not be used: None known

Special exposure hazards arising from the mixture itself, combustion products, or resulting gases:
Toner, like most organic powders, is capable of creating a dust explosion when particles are dispersed. Carbon monoxide and carbon dioxide are hazardous resulting gases.

Special protective equipment for Fire-fighters: None known
6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Avoid dust formation. Do not breathe dust.
Wear personal protective equipment as described in Section 8.

Environmental precautions:
Do not discharge into drains.

Methods for cleaning up:
Eliminate sources of ignition and flammables. Vacuum or sweep the material into a sealed container. If a vacuum cleaner is used, it must be dust explosion-proof. Dispose of the material in accordance with Federal/state/local requirements.

7. HANDLING AND STORAGE

7.1 Handling precautions

Keep out of reach of children.
Avoid dust formation. Handle in adequately ventilated area.
Do not breathe dust. Do not get in eyes or on skin.
Keep away from excessive heat and sources of ignition such as sparks and open flames.
Ensure all the equipment is electrically earthed/grounded before beginning operation.

7.2 Store

Keep out of the reach of children.
Keep container closed and store at room temperature,
Keep away from excessive heat and sources of ignition.
Do not store with strong oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:
Mixture as particulate not otherwise classified

<table>
<thead>
<tr>
<th></th>
<th>OSHA PELs (TWA)</th>
<th>ACGIH TLV (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carbon black</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PELs (TWA)</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV (TWA)</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

| **Amorphous silica**   |                  |                  |
| OSHA PELs (TWA)        | 20 MPPCF* OR 80/\%SiO2 mg/m³ (*million particles per Cubic foot) |
MATERIAL SAFETY DATA SHEET

Exposure Controls:

**Occupational exposure controls**
- Good general ventilation should be sufficient under normal conditions of use.
- Gloves are recommended.
- Protective goggles or safety glasses are recommended.
- Personal respiratory mask is not required under normal conditions of use, but a respirator is needed in case of dust formation.

**Environmental exposure controls**
- Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

**General information**

- **Appearance:** Fine black powder
- **Odor:** None or slight plastic-like odor

**Important health, safety and environmental information:**

- **pH:** Not applicable
- **Boiling point/boiling range:** Not applicable
- **Flash point:** Not applicable
- **Flammability:** Not flammable
- ** Explosive properties:** Not data available
- **Oxidizing properties:** No data available
- **Vapor pressure:** Not applicable
- **Specific gravity:** 1.0-1.5 (water=1)
- **Solubility:** Partially soluble in toluene and tetrahydrofuran
- **Water solubility:** Negligible
- **Partition coefficient (n-octanol/water):** Not applicable
- **Viscosity:** Not applicable
- **Vapor density:** Not applicable
- **Evaporation rate:** Not applicable

**Other information**
- None

10. STABILITY AND REACTIVITY

This material is stable under normal conditions of use and storage.
No hazardous polymerization will occur.
No significant reaction will occur with air or water at room temperature.
MATERIAL SAFETY DATA SHEET

Condition to avoid
Excessive heat
Dust formation

Materials to avoid
Strong oxidizers, which could vigorously oxidize organic materials in this mixture and cause a fire in an extreme case.

Hazardous decomposition products
Carbon monoxide and carbon dioxide when combusted.

11. TOXICOLOGICAL INFORMATION
According to our test results of this or similar mixture and the information provided by the suppliers about the substances contained in this mixture, seriously damaging effect is not expected when this mixture is treated in accordance with standard industrial practices and Federal/state/local requirements. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

Acute toxicity

Oral: LD50 rat > 5,000 mg/kg (OECD 425), not harmful. (a similar product)

Inhalation: LC50 rat > 5.36 mg/L (OECD 403) (a similar product) None of the substances in this mixture is classified for Acute inhalation toxicity according to EU Directive 67/548/EEC.

Dermal: LD50 rat > 5,000 mg/kg (OECD 402) (a similar product) None of the substances in this mixture is classified as irritant according to OSHA Hazard Communication Standard 29 CFR 1910.1200 or for acute dermal toxicity according to EU Directive 67/548/EEC.

Eye irritation: No test data available. None of the substances in this mixture is classified as eye irritant EU Directive 67/548/EEC.

Skin irritation: No test data available. None of the substances in this mixture is classified as a skin irritant according to OSHA Hazard Communication Standard 29 CFR 1910.1200 or EU Directive 67/548/EEC.

Sensitization: No test data available. None of the substances in this mixture is classified as a sensitizer according to OSHA Hazard Communication Standard 29 CFR 1910.1200 or EU Directive 67/548/EEC.

Chronic Toxicity:
No test data available None of the substances in this mixture is classified as very toxic,
MATERIAL SAFETY DATA SHEET

toxic or harmful for chronic effect according to EU Directive 67/548/EEC.

Mutagenicity: Ames test (Salmonella typhimurium, Escherichia coli) negative. (a similar product)

Carcinogenicity: No test data available
None of the substances in this mixture is classified for carcinogenicity according to EU Directive 67/548/EEC. Carbon black is listed by IARC as a group 2B (possibly Carcinogenic), but IARC monographs vol. 65 and 93 state that there is inadequate evidence in humans for carcinogenicity of black. Inhalation test of a toner for two years* showed no significant carcinogenicity. In addition IARC monograph vol. 93 states that no significant exposure to carbon black is thought to occur during the use of products in which carbon black is bound to other materials, such as rubber printing ink or paint. Carbon black in this mixture is in a bound form.

* Negative Effect of Long-term Inhalation of Toner on Formation Of 8-hydroxydeoxyguanosine in DNA in the lungs of Rats in Vivo

Reproductive toxicity:
No test data available.
None of the substances in this mixture is classified for reproductive toxicity according to EU Directive 67/548/EEC.

12. ECOLOGICAL INFORMATION
According to our test results or this or similar mixture and the information provided by the suppliers about the substances contained in this mixture, this mixture is not expected to be harmful to ecology.

Ecotoxicity:
No data available

Mobility
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Results of PBT assessment
Not applicable

Other adverse effects
None known
13. DISPOSAL CONSIDERATIONS
This mixture may be landfilled or incinerated in compliance with all Federal/state/local provisions.
Do not dump this product into sewers, on the ground, or into any body of water.

14. TRANSPORTATION INFORMATION

International Transport Information
Not a regulated material under the United State DOT, IMDG, ADR, RID, or ICAO/IATA.

15. REGULATORY INFORMATION

TSCA: All the substances in this mixture is listed or exempted in accordance with TSCA.
CERCLA Reportable Quantity (40 CFR 117,302):
Not applicable to this mixture.
SARA Title III
Section 302 (40 CFR 355):
Not applicable to this mixture.
Section 311/312 (40 CFR 370):
Carbon black
Immediate health hazard: No
Chronic health of pressure hazard: No
Sudden release of pressure hazard: No
Reactive hazard: No
Section 313 (40 CFR 372):
Not applicable to this mixture.

Please refer to any other Federal/state/local measures that may be relevant.

16. OTHER INFORMATION
This information is believed to be true and accurate. It represents the best information currently available to us. We make no warranty, Expressed or implied with regard to such information. We make no liability resulting from its use. Users should make their own investigations to determine the suitability for their particular purposes.

REVISION DATE: 2009-10-12
SAFETY DATA SHEET: 2009-10-12

Abbreviations
ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (The European agreement on cross-border transportation of dangerous goods by road).
CAS Chemical Abstracts Service
# MATERIAL SAFETY DATA SHEET

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response Compensation and Liability Act.</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>EINCES</td>
<td>European Inventory of Existing Commercial Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency of Research on Cancer</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Medical Guide of Ships</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose, 50% kill</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PELs</td>
<td>Permissible Exposure Limits</td>
</tr>
<tr>
<td>RID</td>
<td>Réglement International concernant le transport des marchandises Dangereuses par chemin de fer (the International regulations covering transportation of dangerous goods by rail)</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act of 1986</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
</tbody>
</table>