SAFETY DATA SHEET

1. Identification

Product identifier: SSG4400B

Other means of identification
Synonyms: Silicone Curing Agent - B

Recommended use and restriction on use
Recommended use: Not known.
Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information
Momemtive Performance Materials LLC
260 Hudson River Road
Waterford NY 12188

Contact person: commercial.services@momentive.com

Telephone: General information
+1-800-295-2392

Emergency telephone number
 Supplier: CHEMTREC
1-800-424-9300

2. Hazard(s) Identification

Hazard Classification

Physical Hazards
Flammable liquids Category 4

Health Hazards
Serious Eye Damage/Eye Irritation Category 1
Skin sensitizer Category 1
Toxic to reproduction Category 1B

Label Elements

Hazard Symbol:
Signal Word: Danger

Hazard Statement: H227; Combustible liquid.
H317; May cause an allergic skin reaction.
H318; Causes serious eye damage.
H360; May damage fertility or the unborn child.

Precautionary Statements

Prevention: Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

Substance(s) formed under the conditions of use: Mixture

3. Composition/information on ingredients
Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Carbon Black</td>
<td>1333-86-4</td>
<td>20 - &lt;50%</td>
<td># This substance has workplace exposure limit(s).</td>
</tr>
<tr>
<td>gamma-Aminopropyltriethoxysilane</td>
<td>919-30-2</td>
<td>10 - &lt;20%</td>
<td>No data available.</td>
</tr>
<tr>
<td>TETRA-N-PROPYL-SILICATE</td>
<td>682-01-9</td>
<td>10 - &lt;20%</td>
<td>No data available.</td>
</tr>
<tr>
<td>DIBUTYL TINOXIDE (48% as Tin)</td>
<td>818-08-6</td>
<td>0.3 - &lt;1%</td>
<td># This substance has workplace exposure limit(s).</td>
</tr>
<tr>
<td>DIISOOCTYLPHTHALATE</td>
<td>27554-26-3</td>
<td>0.3 - &lt;1%</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

(1) The respirable particle(s) listed above are inextricably bound within the polymer matrix, and therefore does not present an inhalation hazard during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

4. First-aid measures

Ingestion: If swallowed, do NOT induce vomiting. Give a glass of water. Do not give victim anything to drink if he is unconscious. Get medical attention if any discomfort continues.

Inhalation: Move to fresh air. Consult a physician after significant exposure.

Skin Contact: Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Most important symptoms/effects, acute and delayed

Symptoms: There is no specific antidote. Treatment is symptomatic and supportive.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures
General Fire Hazards: No data available.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Foam. Carbon dioxide

Unsuitable extinguishing media: No data available.

Specific hazards arising from the chemical: No data available.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid contact with skin and eyes. Keep out of reach of children. Attention: Not for injection into humans.

Methods and material for containment and cleaning up: Wipe, scrape or soak up in an inert material and put in a container for disposal. Wear proper protective equipment as specified in the protective equipment section. Warn other workers of spill. Keep unauthorized personnel away.

Environmental Precautions: Prevent runoff from entering drains, sewers, or streams.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected.

Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks and open flame. Keep container closed.

8. Exposure controls/personal protection

Control Parameters
SDS_US
Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Carbon Black - Inhalable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (03 2015)</td>
</tr>
<tr>
<td>(1) Carbon Black</td>
<td>REL</td>
<td>0.1 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2010)</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>3.5 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2010)</td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>3.5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td>DIBUTYL TINOXIDE (48% as Tin) - as Sn</td>
<td>STEL</td>
<td>0.2 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (03 2015)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (03 2015)</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>0.1 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2010)</td>
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<td></td>
<td>PEL</td>
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<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
</tbody>
</table>

This product contains one or more substances with an occupational exposure limit. However, the respirable particle(s) of this/these substance(s) are inextricably bound within the polymer matrix. Therefore, we do not expect an exposure to this/these substance(s) during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

**Appropriate Engineering Controls**
Provide eyewash station and safety shower. General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment. Provide adequate ventilation if fumes or vapors are generated.

**Individual protection measures, such as personal protective equipment**

**General information:** Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

**Eye/face protection:** Use approved safety goggles or face shield.

**Skin Protection**

**Hand Protection:** No data available.

**Other:** Wear suitable protective clothing and eye/face protection.

**Respiratory Protection:** Use only in well-ventilated areas.

**Hygiene measures:** No data available.
### 9. Physical and chemical properties

**Appearance**

- **Physical state:** solid
- **Form:** Paste
- **Color:** Black
- **Odor:** amine like
- **Odor threshold:** No data available.
- **pH:** not applicable
- **Melting point/freezing point:** ca. -29.0 °C
- **Initial boiling point and boiling range:** > 200 °C
- **Flash Point:** > 63.0 °C (PENSKY-MARTENS)
- **Evaporation rate:** < 1
- **Flammability (solid, gas):** No data available.

**Upper/lower limit on flammability or explosive limits**

- Flammability limit - upper (%): No data available.
- Flammability limit - lower (%): No data available.
- Explosive limit - upper (%): No data available.
- Explosive limit - lower (%): No data available.

**Heat of combustion:** No data available.

**Vapor pressure:** not applicable

**Vapor density:** No data available.

**Density:** 1 g/cm³ (20 °C)

**Relative density:** ca. 1.0

**Solubility(ies)**

- **Solubility in water:** Reactive.
- **Solubility (other):** Hexanes

**Partition coefficient (n-octanol/water) Log Pow:** No data available.

**Auto-ignition temperature:** No data available.

**Decomposition temperature:** No data available.

**SADT:** No data available.

**Viscosity, dynamic:** No data available.

**Viscosity, kinematic:** No data available.

**VOC:** 225 g/l

### 10. Stability and reactivity

- **Reactivity:** No data available.
**Chemical Stability:**
Material is stable under normal conditions.

**Possibility of hazardous reactions:**
Hazardous polymerisation does not occur.

**Conditions to avoid:**
Keep away from sources of ignition - No smoking. Keep away from any contact with water.

**Incompatible Materials:**
Reacts with water forming ethanol. Avoid contact with acids and oxidizing substances.

**Hazardous Decomposition Products:**
Amines. Ethanol. Carbon oxides Oxides of silicon. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

### 11. Toxicological information

**Information on likely routes of exposure**

- **Ingestion:** No data available.
- **Inhalation:** No data available.
- **Skin Contact:** No data available.
- **Eye contact:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Ingestion:** No data available.
- **Inhalation:** No data available.
- **Skin Contact:** No data available.
- **Eye contact:** No data available.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

- **Oral Product:** No data available.

- **Specified substance(s):**
  - DIBUTYL TINOXIDE (48% as Tin) LD 50 (Rat): 487 mg/kg

- **Dermal Product:** No data available.
Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Specified substance(s):
gamma-Aminopropyltriethoxysilane
NOAEL (Rat, Oral, 90 d): 200 mg/kg

Skin Corrosion/Irritation
Product: OECD-Guideline 404 (Acute Dermal Irritation/Corrosion) (Rabbit, 4.0 h): The health hazard evaluation is based on the toxicological properties of a similar material.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

No carcinogenic components identified
Germ Cell Mutagenicity

**In vitro**
Product: No data available.

**Specified substance(s):**
- gamma-Aminopropyltriethoxysilane
  - Ames-Test: negative
  - Chinese Hamster Ovary (CHO): negative

**In vivo**
Product: No data available.

**Specified substance(s):**
- gamma-Aminopropyltriethoxysilane
  - Micronucleus test (mouse): negative

**Reproductive toxicity**
Product: No data available.

**Specific Target Organ Toxicity - Single Exposure**
Product: No data available.

**Specific Target Organ Toxicity - Repeated Exposure**
Product: No data available.

**Aspiration Hazard**
Product: No data available.

**Other effects:**
Product releases amine vapors during cure. Contains dibutyltin compound(s) - May impair fertility. May cause harm to unborn child.

**Ingestion:** No data available.

**Inhalation:** No data available.

**Skin Contact:** No data available.

**Eye contact:** No data available.
Oral
No data available.

Dermal
No data available.

Inhalation
No data available.

Repeated dose toxicity
No data available.

Skin Corrosion/Irritation
No data available.

Serious Eye Damage/Eye Irritation
No data available.

Respiratory or Skin Sensitization
No data available.

Carcinogenicity
No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No data available.

US. National Toxicology Program (NTP) Report on Carcinogens:
No data available.

No data available.

Germ Cell Mutagenicity

In vitro
No data available.

Germ Cell Mutagenicity

In vivo
No data available.

Reproductive toxicity
No data available.

**Specific Target Organ Toxicity - Single Exposure**
No data available.

**Specific Target Organ Toxicity - Single Exposure**
No data available.

**Target Organs**
No data available.

**Aspiration Hazard**
No data available.

**Other effects**
No data available.

### 12. Ecological information

**Ecotoxicity:**

- **Acute hazards to the aquatic environment:**

  **Fish**
  Product: No data available.

  **Specified substance(s):**
  gamma-Aminopropyltriethoxysilane
  LC50 (Brachydanio rerio, 96 h): > 934 mg/l

  **Aquatic Invertebrates**
  Product: No data available.

  **Specified substance(s):**
  gamma-Aminopropyltriethoxysilane
  EC50 (Daphnia magna, 48 h): 331 mg/l

- **Chronic hazards to the aquatic environment:**

  **Fish**
  Product: No data available.

  **Aquatic Invertebrates**
  Product: No data available.
Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):
- gamma-Aminopropyltriethoxysilane
  - EC50 (Desmodesmus subspicatus (green algae), 72 h): > 1,000 mg/l
  - NOEC (Desmodesmus subspicatus (green algae), 72 h): 1.3 mg/l

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):
- gamma-Aminopropyltriethoxysilane
  - 67% (28 d) Not readily degradable. hydrolyses

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil:

No data available.

Known or predicted distribution to environmental compartments

(1) Carbon Black
- No data available.

gamma-Aminopropyltriethoxysilane
- No data available.

TETRA-N-PROPYL-SILICATE
- No data available.

DIBUTYL TINOXIDE (48% as Tin)
- No data available.

DIISOCTYLPHTHALATE
- No data available.

Other adverse effects:

No data available.

13. Disposal considerations
Disposal instructions: Disposal should be made in accordance with federal, state and local regulations.

Contaminated Packaging: No data available.

14. Transport information

DOT
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

Special precautions for user: This product must be classified as a Combustible liquid, n.o.s. only when shipped in containers > 450 L (119 gallons) for both import and domestic shipment. Non-bulk containers are classified as shown in the IMDG and IATA classification for both domestic and international shipment. Keep away from foodstuffs and animal feed.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.
SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Carbon Black</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>gamma-Aminopropyltriethoxysilane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>TETRA-N-PROPYL-SILICATE</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>DIBUTYL TINOXIDE (48% as Tin)</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>DIISOOCTYLPHTHALATE</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Maximum Allowable Dose Level (MADL):</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Carbon Black</td>
<td>13000 µg/day.</td>
</tr>
<tr>
<td>Ethanol</td>
<td>Developmental toxin.</td>
</tr>
<tr>
<td>Toluene</td>
<td></td>
</tr>
</tbody>
</table>

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
SILOXANES AND SILICONES, DI-ME
gamma-Aminopropyltriethoxysilane
TETRA-N-PROPYL-SILICATE
DIBUTYL TINOXIDE (48% as Tin)
DIISOOCTYLPHTHALATE

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
(1) Carbon Black
US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

<table>
<thead>
<tr>
<th>Inventory Status</th>
<th>Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia AICS:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Canada DSL Inventory List:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>EU EINECS List:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Japan (ENCS) List:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>China Inventory of Existing Chemical Substances:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Korea Existing Chemicals Inv. (KECI):</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Canada NDSL Inventory:</td>
<td>n (Negative listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Philippines PICCS:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>US TSCA Inventory:</td>
<td>y (positive listing)</td>
<td>None.</td>
</tr>
<tr>
<td>Taiwan. Taiwan inventory (CSNN):</td>
<td>n (Negative listing)</td>
<td>None.</td>
</tr>
</tbody>
</table>

16. Other information, including date of preparation or last revision

HMIS Hazard ID

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Flammability</td>
<td>2</td>
</tr>
<tr>
<td>Physical Hazards</td>
<td>1</td>
</tr>
</tbody>
</table>

PERSONAL PROTECTION

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 03/21/2017
Revision Date: No data available.
Version #: 4.0
Further Information: No data available.
Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (>30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

Further Information

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.

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