1. Product and Company Identification

Product Name: BAYBLOCK SS 80
Material Number: 81157422
Chemical Family: Dimethylpolysiloxane, Fillers, in Solvent Naphtha

2. Hazards Identification

Emergency Overview

**WARNING! Color:** White  **Form:** liquid  **Odor:** Mild, Solvent.
Flammable. May cause eye, skin, and respiratory tract irritation. Also harmful by inhalation and if swallowed. Vapors may travel to areas away from work site before igniting/FLASHING back to vapor source. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Closed container may forcibly rupture under extreme heat. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Toxic gases/fumes may be given off during burning or thermal decomposition. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. May affect nervous system. May cause kidney damage. May cause liver damage. Contains material which may cause cancer.

Potential Health Effects

**Primary Routes of Entry:** Skin Contact, Eye Contact, Ingestion, Inhalation

**Medical Conditions Aggravated by Exposure:** Skin disorders, Respiratory disorders, Eye disorders

**HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE**

**Inhalation**
**Acute Inhalation**
**For Component: Limestone**
Causes respiratory tract irritation with symptoms of coughing, sore throat and runny nose. May cause mechanical irritation.
For Component: **Naphtha**  
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Inhalation of the solvents may cause central nervous system depression with symptoms of nausea, lightheadedness, drowsiness, dizziness and loss of co-ordination.

For Component: **Titanium dioxide (Rutile)**  
May cause mechanical irritation.

For Component: **Crystalline Quartz Silica**  
May be harmful by inhalation. May cause mechanical irritation.

**Chronic Inhalation**  
For Product: **BAYBLOCK SS 80**  
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal.

For Component: **Naphtha**  
Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

**Skin**  
Acute Skin  
For Component: **Limestone**  
Causes irritation with symptoms of reddening, itching, and swelling. May cause mechanical irritation.

For Component: **Naphtha**  
May cause irritation with symptoms of reddening and itching. May be harmful if absorbed through skin.

For Component: **Stearic Acid**  
May cause irritation with symptoms of reddening and itching.

For Component: **Titanium dioxide (Rutile)**  
Not expected to be irritating.

For Component: **Crystalline Quartz Silica**  
May cause mechanical irritation.

**Chronic Skin**  
For Component: **Naphtha**  
May cause defatting of the skin with symptoms of dryness and cracking.

**Eye**  
Acute Eye  
For Component: **Limestone**  
Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause mechanical irritation.

For Component: **Naphtha**  
May cause irritation with symptoms of reddening, tearing and stinging.

For Component: **Stearic Acid**  
May cause slight irritation.

For Component: **Titanium dioxide (Rutile)**  
Not expected to be irritating.
For Component: **Crystalline Quartz Silica**
May cause mechanical irritation.

**Acute Ingestion**

For Component: **Limestone**
Slightly toxic by ingestion.

For Component: **Naphtha**
May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion. Ingestion and/or vomiting may cause aspiration into the lungs resulting in chemical pneumonitis (inflammation of the lungs).

For Component: **Stearic Acid**
Not expected to be harmful if swallowed.

For Component: **Titanium dioxide (Rutile)**
Not expected to be harmful if swallowed.

For Component: **Crystalline Quartz Silica**
Not expected to be harmful if swallowed.

**General Effects of Exposure**

**Acute Effects of Exposure**

For Component: **Crystalline Quartz Silica**
Exposure to Silica, Quartz can cause a very serious lung disease called Silicosis with cough, shortness of breath, and changes in chest x-ray. The earliest symptoms of silicosis may include: Shortness of breath, coughing, wheezing, fatigue, chest pain, loss of appetite and fever.

**Chronic Effects of Exposure**

For Component: **Crystalline Quartz Silica**
Excessive exposure to airborne crystalline silica can cause fibrotic lung damage, with scarring of the lungs with cough and shortness of breath. This is called "Silicosis". This is generally a slowly developing fibrotic disease as symptoms are usually delayed for 10 years or more. Symptoms are dyspnea, chest pain, breathlessness, and cough. The chronic lung scarring developed from the silica dust causes a progressive massive fibrosis. This may lead to increased susceptibility to tuberculosis.

**Carcinogenicity:**

- **Titanium dioxide (Rutile)**
  - IARC - Overall evaluation: 2B Possible carcinogen.

- **Crystalline Quartz Silica**
  - NTP - Hazard Designation: Known carcinogen.
  - IARC - Overall evaluation: 1 Human carcinogen.

### 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 35%</td>
<td>Limestone</td>
<td>1317-65-3</td>
</tr>
<tr>
<td>15 - 25%</td>
<td>Naphtha</td>
<td>64741-41-9</td>
</tr>
<tr>
<td>3 - 7%</td>
<td>D4 &amp; HMDZ Treated Silicone Dioxide</td>
<td>68937-51-9</td>
</tr>
<tr>
<td>3 - 7%</td>
<td>Stearic Acid</td>
<td>57-11-4</td>
</tr>
<tr>
<td>3 - 7%</td>
<td>Titanium dioxide (Rutile)</td>
<td>13463-67-7</td>
</tr>
<tr>
<td>3 - 7%</td>
<td>Methyltrimethylsiloxane</td>
<td>1185-55-3</td>
</tr>
</tbody>
</table>
4. First Aid Measures

**Eye Contact**
In case of contact, flush eyes with plenty of lukewarm water. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention.

**Skin Contact**
In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Thoroughly clean shoes before reuse. Wash clothing before reuse.

**Inhalation**
If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

**Ingestion**
If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

5. Fire-Fighting Measures

**Suitable Extinguishing Media:**
All extinguishing media are suitable.

**Special Fire Fighting Procedures**
Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

**Unusual Fire/Explosion Hazards**
Flammable Liquid. Vapors may spread long distances and ignite. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

6. Accidental release measures

**Spill and Leak Procedures**
Cleanup personnel must use appropriate personal protective equipment. Remove all sources of ignition, including flames, heat, and sparks. Dike or dam spilled material and control further spillage, if possible. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Wash spill area with soap and water.

7. Handling and Storage

**Storage Temperature:**
- **maximum:** 40 °C (104 °F)
Storage Period
6 Months

Handling/Storage Precautions
Keep away from heat, sparks and open flames. Ground and bond containers and equipment before transferring to avoid static sparks. Do not breathe vapours or spray mist. Avoid contact with eyes. Avoid contact with skin or clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

Further Info on Storage Conditions
Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

8. Exposure Controls / Personal Protection

Limestone (1317-65-3)
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 5 mg/m3  (Respirable fraction.)
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m3  (Total dust.)

Titanium dioxide (Rutile) (13463-67-7)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 10 mg/m3
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m3  (Total dust.)
US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Stearic Acid (57-11-4)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 10 mg/m3
US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Crystalline Quartz Silica (14808-60-7)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 0.025 mg/m3  (Respirable fraction.)
US. ACGIH Threshold Limit Values
Hazard Designation: Group A2 Suspected human carcinogen.

Industrial Hygiene/Ventilation Measures
General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent the build up of explosive atmospheres and to prevent off gases from entering the work place.

Respiratory Protection
The use of a positive pressure supplied air respirator is mandatory when: airborne concentrations are not known; airborne solvent levels are 10 times the appropriate TLV; spraying is performed in a confined space or area with limited ventilation.

Hand Protection
Permeation resistant gloves., Butyl rubber gloves., Nitrile rubber gloves., Neoprene gloves

**Eye Protection**
Chemical resistant goggles must be worn., Chemical safety goggles in combination with a full face shield if a splash hazard exists.

**Skin and body protection**
Permeation resistant clothing, Gloves, long sleeved shirts and pants.

**Additional Protective Measures**
Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form:</strong></td>
<td>liquid</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>White</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Mild, Solvent</td>
</tr>
<tr>
<td><strong>Freezing Point:</strong></td>
<td>Not Established</td>
</tr>
<tr>
<td><strong>Boiling Point/Range:</strong></td>
<td>156 °C (312.8 °F)</td>
</tr>
<tr>
<td><strong>Flash Point:</strong></td>
<td>40 °C (104 °F) (Tagliabue Closed Cup (ASTM D-56))</td>
</tr>
<tr>
<td><strong>Lower Explosion Limit:</strong></td>
<td>1 %(V)</td>
</tr>
<tr>
<td><strong>Upper Explosion Limit:</strong></td>
<td>6 %(V)</td>
</tr>
<tr>
<td><strong>Vapor Pressure:</strong></td>
<td>&lt; 5 mmHg @ 20 °C (68 °F)</td>
</tr>
<tr>
<td><strong>Specific Gravity:</strong></td>
<td>1.21</td>
</tr>
<tr>
<td><strong>Solubility in Water:</strong></td>
<td>Insoluble</td>
</tr>
<tr>
<td><strong>Autoignition Temperature:</strong></td>
<td>232 °C (449.6 °F)</td>
</tr>
<tr>
<td><strong>Bulk Density:</strong></td>
<td>1,207.6 kg/m3</td>
</tr>
</tbody>
</table>

### 10. Stability and Reactivity

**Hazardous Reactions**
Hazardous polymerization does not occur.

**Stability**
Stable

**Materials to avoid**
Oxidizing agents

**Conditions to avoid**
Heat, flames and sparks.

**Hazardous decomposition products**
By Fire and Thermal Decomposition: Formaldehyde; Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, Other undetermined compounds

### 11. Toxicological Information

**Toxicity Data for BAYBLOCK SS 80**

**Toxicity Note**
No data available for this component.

**Toxicity Data for Siloxanes and Silicones, di-Me, hydroxy-terminated**

**Acute Oral Toxicity**
LD50: > 5,000 mg/kg (Rat)

**Acute Inhalation Toxicity**
LC50: > 8,750 mg/m3, 7 h (Rat)

**Acute dermal toxicity**
LD50: > 2,000 mg/kg (rabbit)

**Toxicity Data for Limestone**

**Acute Oral Toxicity**
LD50: 6,450 mg/kg (Rat)

**Skin Irritation**
rabbit, Draize, Exposure Time: 24 hrs, Moderately irritating

**Eye Irritation**
rabbit, Draize, Exposure Time: 24 hrs, Severely irritating

**Toxicity Data for Stearic Acid**

**Acute Oral Toxicity**
LD50: > 5,000 mg/kg (Rat)

**Acute dermal toxicity**
LD50: > 5,000 mg/kg (rabbit)

**Skin Irritation**
rabbit, Moderately irritating

**Eye Irritation**
rabbit, Slightly irritating

**Toxicity Data for Methyltrimethylsiloxane**

**Acute Oral Toxicity**
LD50: > 5,000 mg/kg (Rat)

**Acute dermal toxicity**
LD50: LD= >10ml/kg (rabbit)

**Skin Irritation**
rabbit, Slightly irritating

**Eye Irritation**
rabbit, Slightly irritating

**Toxicity Data for Titanium dioxide (Rutile)**

**Acute Oral Toxicity**
LD50: > 5,000 mg/kg (Rat)

**Acute Inhalation Toxicity**
LC0: > 6.82 mg/l, dust/particulate, 4 hrs (Rat)

**Acute dermal toxicity**
LD50: > 5,000 mg/kg (rabbit)

**Skin Irritation**
rabbit, Exposure Time: 24 hrs, Non-irritating

**Eye Irritation**
rabbit, Draize, Non-irritating

**Sensitization**
dermal: non-sensitizer (Guinea pig, Maximization Test)
dermal: non-sensitizer (Human, Patch Test)

**Repeated Dose Toxicity**
28 Days, inhalation: NOAEL: 35 mg/m3, (Rat)

**Mutagenicity**
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Genetic Toxicity in Vivo:
Drosophila SLRL test: negative (Drosophila melanogaster)

**Carcinogenicity**
Rat, Male/Female, inhalation,
According to IARC, several rat inhalation and intratracheal installation studies using titanium dioxide have shown increases in benign and malignant lung tumors. Reviewed human exposure data did not suggest an association between occupational exposure to titanium dioxide and risk for cancer. Additionally, the IARC working group determined that, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other material, such as in paints."

**Toxicity Data for Crystalline Quartz Silica**

**Mutagenicity**
Genetic Toxicity in Vitro:
Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic Activation: with/without)
Genetic Toxicity in Vivo:
Sister Chromatid Exchange: ambiguous (hamster)

**Carcinogenicity**
rat, Male/Female, inhalation, 2 years, 6 hrs/day 5 days/week positive

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**12. Ecological Information**

**Ecological Data for Limestone**

**Biodegradation**
Not readily biodegradable.

**Acute and Prolonged Toxicity to Fish**
LC50: 56,000 mg/l (Mosquitofish (Gambusia affinis), 48 hrs)

**Ecological Data for Titanium dioxide (Rutile)**

**Acute and Prolonged Toxicity to Fish**
LC0: > 1,000 mg/l (Golden orfe (Leuciscus idus), 48 hrs)
Acute Toxicity to Aquatic Invertebrates
EC0: > 3 mg/l (Water flea (Daphnia magna))

Toxicity to Microorganisms
EC0: > 10,000 mg/l, (Pseudomonas fluorescens, 24 hrs)
EC0: > 5,000 mg/l, (Escherichia coli)

Ecological Data for Stearic Acid
Biodegradation
> 60 %, Exposure time: 10 d
Readily biodegradable.

Acute and Prolonged Toxicity to Fish
LC0: > 100 mg/l (Common Carp (Cyprinus carpio))

13. Disposal considerations

Waste Disposal Method
Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions
Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

14. Transportation information

Land transport (DOT)
Proper Shipping Name: Flammable liquids, n.o.s. (contains Naphtha)
Hazard Class or Division: 3
UN/NA Number: UN1993
Packaging Group: III
Hazard Label(s): Flammable Liquid

Sea transport (IMDG)
Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (contains Naphtha)
Hazard Class or Division: 3
UN-No: UN1993
Packaging Group: III
Hazard Label(s): Flammable liquids

Air transport (ICAO/IATA)
Proper Shipping Name: Flammable liquid, n.o.s. (contains Naphtha)
Hazard Class or Division: 3
UN-No: UN1993
Packaging Group: III
Hazard Label(s): Flammable liquids
15. Regulatory Information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):
Components
None

SARA Section 311/312 Hazard Categories:
Acute Health Hazard, Chronic Health Hazard, Fire Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):
Components
None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:
Components
None

When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA Hazardous Waste Number D001). (40 CFR 261.20-24)

State Right-To-Know Information
The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight % | Components | CAS-No.
--- | --- | ---
25 - 35% | Limestone | 1317-65-3
>=1% | Siloxanes and Silicones, di-Me, hydroxy-terminated | 70131-67-8
15 - 25% | Naphtha | 64741-41-9
3 - 7% | D4 & HMDZ Treated Silicone Dioxide | 68937-51-9
3 - 7% | Stearic Acid | 57-11-4
3 - 7% | Titanium dioxide (Rutile) | 13463-67-7
3 - 7% | Methyltrimethylsiloxane | 1185-55-3

MA Right to Know Extraordinarily Hazardous Substance List:

Weight % | Components | CAS-No.
--- | --- | ---
0.1 - 1% | Crystalline Quartz Silica | 14808-60-7

California Prop. 65:
Warning! This product contains chemical(s) known to the State of California to be Carcinogenic.

Weight % | Components | CAS-No.
16. Other Information

NFPA 704M Rating

<table>
<thead>
<tr>
<th>Category</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>Reactivity</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

<table>
<thead>
<tr>
<th>Category</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 Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

The method of hazard communication for Bayer MaterialScience LLC is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer MaterialScience LLC as a customer service.

Contact Person: Product Safety Department
Telephone: (412) 777-2835
MSDS Number: 000000009958
Version Date: 09/13/2008
Report Version: 1.1

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