Material Name:
SmartRoof™ Silicone Roof Coating

Section 1 - Chemical Product and Company Identification

Manufacturer Information
West Development Group
300 Commerce Drive
LaGrange, OH 44050
Phone: 440-355-4682

Emergency Numbers:
CHEMTREC (USA): 800-424-9300
CHEMTREC (Intl): 703-527-3887
National Poison Control: 800-222-1222

Section 2 - Hazards Identification

Emergency Overview
May cause eye and skin irritation.

Potential Health Effects: Eyes
May cause irritation.

Potential Health Effects: Skin
May cause irritation.

Potential Health Effects: Ingestion
Not a likely route of exposure under normal product use conditions. If swallowed, may cause gastrointestinal irritation.

Potential Health Effects: Inhalation
Not expected due to low vapor pressure.

HMIS Ratings:
Health: 1  Fire: 0  HMIS Reactivity: 0  Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe  * = Chronic hazard

Section 3 - Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-10-4</td>
<td>Ethyl silicate</td>
</tr>
<tr>
<td>1760-24-3</td>
<td>N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
</tr>
<tr>
<td>37244-96-5</td>
<td>Nepheline syenite</td>
</tr>
<tr>
<td>13463-67-7</td>
<td>Titanium dioxide</td>
</tr>
<tr>
<td>112945-52-5</td>
<td>Silica, amorphous, fumed, crystal-free</td>
</tr>
<tr>
<td>64742-47-8</td>
<td>Petroleum and distillates, hydro-treated light</td>
</tr>
<tr>
<td>70131-67-8</td>
<td>Siloxanes and silicones, dimethyl, hydroxy-terminated</td>
</tr>
<tr>
<td>22984-54-9</td>
<td>2-Butanone, O,O',O''-(methylsilylidyne)trioxime</td>
</tr>
<tr>
<td>96-29-7</td>
<td>Methyl ethyl ketoxime</td>
</tr>
</tbody>
</table>

Section 4 - First Aid Measures

First Aid: Eyes
In case of contact, immediately flush eyes with large amounts of water, continuing to flush for 15 minutes.

First Aid: Skin
For skin contact, wash immediately with soap and water. If irritation persists, get medical attention.

First Aid: Ingestion
If the material is swallowed, get immediate medical attention or advice.

First Aid: Inhalation
None necessary.

Section 5 - Fire Fighting Measures

General Fire Hazards
See Section 9 for Flammability Properties.
This material does not present any unusual fire or explosion hazards.

Hazardous Combustion Products
Oxides of carbon, formaldehyde, silicon dioxide and hydrocarbons.

Extinguishing Media
Use water mist, carbon dioxide, sand, dry chemical or alcohol-resistant foam.

Fire Fighting Equipment/Instructions
Firefighters should wear full protective gear.

NFPA Ratings:
Health: 1  Fire: 0  Reactivity: 0  Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
Material Safety Data sheet

Section 6 - Accidental Release Measures

Containment Procedures
Prevent material from entering surface waters, drains or sewers and soil. Contain any fluid that runs out using suitable material. Close leak if possible without risk.

Clean-Up Procedures
Take up mechanically and dispose of according to local, state, and federal regulations. For small amounts: Absorb with a liquid binding material such as diatomaceous earth. Contain larger amounts and pump up into suitable containers. Clean any slippery coating that remains using a detergent/soap solution or another biodegradable cleaner. Apply sand or other inert granular material to improve traction.

Evacuation Procedures
Isolate area. Keep unnecessary personnel away.

Special Procedures
Disposal of spilled materials should be in accordance with local, state, and federal regulations.

Section 7 - Handling and Storage

Handling Procedures
Avoid contact with skin and eyes. Spilled substance increases risk of slipping.

Storage Procedures
Keep container tightly closed and in a dry and cool place.

Section 8 - Exposure Controls / Personal Protection

A: Component Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>3.5 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA</td>
<td>3.5 mg/m³ TWA, 0.1 mg/m³ TWA (as PAH, carbon black in presence of polycyclic aromatic hydrocarbons)</td>
</tr>
<tr>
<td>Ethyl silicate (78-10-4)</td>
<td>10 ppm TWA</td>
<td>10 ppm TWA; 85 mg/m³ TWA</td>
<td>10 ppm TWA; 85 mg/m³ TWA</td>
</tr>
<tr>
<td>Titanium Dioxide (13463-67-7)</td>
<td>10 mg/m³ TWA</td>
<td>10 mg/m³ TWA</td>
<td>10 mg/m³ TWA (total dust)</td>
</tr>
</tbody>
</table>

Engineering Controls
Use with adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face
Safety glasses with side shields.

Personal Protective Equipment: Skin
Use appropriate hand protection.

Personal Protective Equipment: Respiratory
Not normally required.

Personal Protective Equipment: General
Eye wash fountain is recommended.

Section 9 - Physical & Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>ND</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>ND</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>ND</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>ND</td>
</tr>
<tr>
<td>Octanol/H₂O Coeff.:</td>
<td>ND</td>
</tr>
<tr>
<td>Flash Point Method</td>
<td>ND</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>ND</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>ND</td>
</tr>
<tr>
<td>Melting Point</td>
<td>ND</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>ND</td>
</tr>
<tr>
<td>VOC</td>
<td>ND</td>
</tr>
<tr>
<td>Flash Point</td>
<td>ND</td>
</tr>
<tr>
<td>Lower Flammability Limit (LFL)</td>
<td>ND</td>
</tr>
<tr>
<td>Upper Flammability Limit (UFL)</td>
<td>ND</td>
</tr>
<tr>
<td>Burning Rate</td>
<td>ND</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>ND</td>
</tr>
</tbody>
</table>
Section 10 - Chemical Stability & Reactivity Information

Chemical Stability
This is a stable material.

Chemical Stability:
Conditions to Avoid
None known

Incompatibility
None known.

Hazardous Decomposition
Not determined.

Possibility of Hazardous Reactions
Will not occur.

Section 11 - Toxicological Information

Acute Dose Effects
A: General Product Information
No information available for the product.

B: Component Analysis - LD50/LC50
Silica, amorphous, fumed, crystal-free (112945-52-5)
Oral LD50 Rat: 3160 mg/kg

Carbon black (1333-86-4)
Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/kg

Titanium dioxide (9002-89-5)
Oral LD50 Rat: >10000 mg/kg

N-[3-(Trimethyoxysilyl)propyl]-1,2-ethanediamine (1760-24-3)
Oral LD50 Rat: 7460 µL/kg

Petroleum distillates, hydrotreated light (64742-47-8)
Inhalation LC50 Rat: >5.2 mg/L/4H; Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Ethyl silicate (78-10-4)
Oral LD50 Rat: 6270 mg/kg; Dermal LD50 Rabbit: 6300 µL/kg

Methyl ethyl ketoxime (96-29-7)
Inhalation LC50 Rat: 20 mg/L/4H; Oral LD50 Rat: 930 mg/kg; Dermal LD50 Rabbit: 0.2 mg/kg

Carcinogenicity
A: General Product Information
No information available for the product.

B: Component Carcinogenicity
Silica, amorphous, fumed, crystal-free (112945-52-5)
IARC: Monograph 68 [1997] (listed under Amorphous silica) (Group 3 (not classifiable))
ACGIH: A4 - Not Classifiable as a Human Carcinogen
NIOSH: potential occupational carcinogen
IARC: Monograph 93 [in preparation], Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))

Carbon black (1333-86-4)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
NIOSH: Potential occupational carcinogen
IARC: Monograph 93 [in preparation], Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))

Titanium dioxide (13463-67-7)

Section 12 - Ecological Information

Ecotoxicity
A: General Product Information
No information available for the product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity
Carbon black (1333-86-4)

Test & Species
24 Hr EC50 Daphnia magna

Conditions
>5600 mg/L

Test & Species
96 Hr LC50 Pimephales promelas
96 Hr LC50 Leuciscus idus
96 Hr LC50 Poecilia reticulata
72 Hr EC50 Scenedesmus subspicatus
48 Hr EC50 Daphnia magna

Conditions
843 mg/L [flow-through]
320-1000 mg/L
760 mg/L [static]
83 mg/L
750 mg/L

Methyl ethyl ketoxime (96-29-7)

Test & Species
96 Hr LC50 Pimephales promelas
96 Hr LC50 Lepomis macrochirus
96 Hr LC50 Den-droneides heteropoda

Conditions
45 mg/L [flow-through]
1740 mg/L [static]
4720 mg/L

Petroleum distillates, hydrotreated light (64742-47-8)

Test & Species
96 Hr LC50 Pimephales promelas
96 Hr LC50 Lepomis macrochirus
96 Hr LC50 Den-droneides heteropoda

Conditions
45 mg/L [flow-through]
1740 mg/L [static]
4720 mg/L
Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions
No EPA Waste Numbers are applicable for this product’s components.

Component Waste Numbers
All wastes must be handled in accordance with local, state and federal regulations.
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Section 14 - Transportation Information

US DOT Information
Shipping Name: Not Regulated.

Section 15 - Regulatory Information

US Federal Regulations
Component Analysis
None of this product’s components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations
Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS#</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethyl silicate</td>
<td>78-10-4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Methyl ethyl ketoxime</td>
<td>96-29-7</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

State Regulations
Component Analysis - WHMIS IDL
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS#</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>1 %</td>
</tr>
<tr>
<td>Ethyl silicate</td>
<td>78-10-4</td>
<td>1 %</td>
</tr>
</tbody>
</table>

Section 16 - Other Information

Key/Legend

EPA = Environmental Protection Agency
TSCA = Toxic Substance Control Act
ACGIH = American Conference of Governmental Industrial Hygienists
IARC = International Agency for Research on Cancer
NIOSH = National Institute for Occupational Safety and Health
NTP = National Toxicology Program
OSHA = Occupational Safety and Health Administration
NJTSR = New Jersey Trade Secret Registry