1. Product and Company Identification

Material name: CHARMIAN COLORED ROOFING GRANULES

Version #: 01
Issue date: 02-17-2015
Revision date: 02-17-2015
Supersedes date: 12-20-2012
CAS #: Mixture
MSDS Number: G11E03

Product use: Applied to surface of roofing material.
Synonym(s): Basalt coated with pigments, sodium silicate, kaolin clay, oil and siloxane.
Manufacturer/Supplier: Specialty Granules Inc.
13424 Pennsylvania Ave.
Suite 303
Hagerstown, MD 21742
gkamas@specialtygranules.com
Contact Person: Gerald M. Kamas

2. Hazards Identification

Physical state: Solid.
Appearance: Granules.
Emergency overview: WARNING

Under normal handling, the product is expected to pose low health hazards. Dusts generated during subsequent remanufacturing may pose the health hazards described in this MSDS. Contains a substance which may cause cancer by inhalation.

OSHA regulatory status: This product is hazardous according to OSHA 29 CFR 1910.1200.

Potential health effects

Routes of exposure:
- Inhalation. Eyes. Skin.

Eyes: May cause eye irritation.
Skin: May cause skin irritation.
Inhalation: Inhalation of dusts may cause respiratory irritation. Contains a substance which may cause cancer by inhalation.

Ingestion: No harmful effects expected in amounts likely to be ingested by accident.

Target organs: Eyes. Skin. Respiratory system.

Chronic effects: Prolonged and repeated overexposure to dust can lead to pneumoconiosis. Inhalation of airborne titanium dioxide dust may cause cancer.

Potential environmental effects: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basalt (Composition varies naturally. Typically contains feldspar, chlorite, microcline, muscovite and epidote)</td>
<td>Mixture</td>
<td>82 - 94</td>
</tr>
<tr>
<td>Quartz (a component of Basalt)</td>
<td>14808-60-7</td>
<td>4 - 12</td>
</tr>
<tr>
<td>Ceramic</td>
<td>Mixture</td>
<td>1-5</td>
</tr>
<tr>
<td>Iron oxide</td>
<td>1309-37-1</td>
<td>&lt; 3</td>
</tr>
</tbody>
</table>
### 4. First Aid Measures

**First aid procedures**

- **Eye contact**: In case of contact, flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation develops and persists.
- **Skin contact**: Wash off with soap and plenty of water. Get medical attention if irritation develops or persists.
- **Inhalation**: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention.
- **Ingestion**: DO NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration. Call a physician or poison control center immediately.

**Notes to physician**

Treat symptomatically.

### 5. Fire Fighting Measures

**Flammable properties**

No unusual fire or explosion hazards noted.

**Extinguishing media**

- **Suitable extinguishing media**: Use appropriate extinguishing media for any nearby fire.

**Protection of firefighters**

- **Protective equipment and precautions for firefighters**: Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.
- **Fire fighting equipment/instructions**: Use protective equipment appropriate for surrounding materials.

**Hazardous combustion products**

None known.

### 6. Accidental Release Measures

**Personal precautions**

Wear appropriate personal protective equipment (See Section 8).

**Methods for cleaning up**

Clean up promptly by sweeping or vacuum. Avoid dust formation. Minimize dust generation and accumulation.

### 7. Handling and Storage

**Handling**

Avoid contact with skin and eyes. Avoid dust formation. Avoid breathing dust. Minimize dust generation and accumulation. Wash thoroughly after handling.

**Storage**

Store in a manner which will minimize dust generation and accumulation. Store in sealed containers in a protected area.

### 8. Exposure Controls / Personal Protection

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Distillates (petroleum, hydrotreated) (CAS 64742-46-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

---

**Composition comments**

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron oxide (CAS 1309-37-1)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Quartz (a component of Basalt) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Titanium dioxide (CAS 13463-67-7)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>PEL</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum, hydrotreated) (CAS 64742-46-7)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
</tbody>
</table>

### US. OSHA Table Z-3 (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (a component of Basalt) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.3 mg/m³</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.1 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4 mppcf</td>
<td>Respirable.</td>
</tr>
</tbody>
</table>

### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum, hydrotreated) (CAS 64742-46-7)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Quartz (a component of Basalt) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable particles.</td>
</tr>
</tbody>
</table>

### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Inhalable</td>
</tr>
<tr>
<td>Quartz (a component of Basalt) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum, hydrotreated) (CAS 64742-46-7)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Quartz (a component of Basalt) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable.</td>
</tr>
</tbody>
</table>

### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum, hydrotreated) (CAS 64742-46-7)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Quartz (a component of Basalt) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable dust.</td>
</tr>
</tbody>
</table>

Mexico. Occupational Exposure Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>STEL</td>
<td>7 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum, hydrotreated) (CAS 64742-46-7)</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Quartz (a component of Basalt) (CAS 14808-60-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable dust.</td>
</tr>
</tbody>
</table>

**Engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**

- **Eye / face protection**: Wear safety glasses with side shields (or goggles).
- **Skin protection**: Wear protective gloves.
- **Respiratory protection**: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

- **Appearance**: Granules.
- **Physical state**: Solid.
- **Form**: Granules.
- **Color**: Not established.
- **Odor**: Not established.
- **Odor threshold**: Not available.
- **pH**: Not determined.
- **Vapor pressure**: Not applicable.
- **Vapor density**: Not available.
- **Boiling point**: Not Applicable.
- **Melting point/Freezing point**: > 2300 °F (> 1260 °C)
- **Solubility (water)**: Negligible.
- **Specific gravity**: 3.0
- **Flash point**: Not determined.
- **Flammability limits in air, upper, % by volume**: Not available.
- **Flammability limits in air, lower, % by volume**: Not available.
- **Auto-ignition temperature**: Not available.
- **Partition coefficient (n-octanol/water)**: No data available.
10. Chemical Stability & Reactivity Information

| Chemical stability                          | Material is stable under normal conditions. |
| Conditions to avoid                        | Not available.                               |
| Incompatible materials                     | No data available.                           |
| Hazardous decomposition products           | No hazardous decomposition products are known.|
| Possibility of hazardous reactions         | Hazardous polymerization does not occur.     |

11. Toxicological Information

<table>
<thead>
<tr>
<th>Toxicological data</th>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Carbon black (CAS 1333-86-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 3 g/kg</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 8000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Sensitization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Carbon black: Certain carbon blacks have proved carcinogenic in animal studies. Inhalation animal studies of high concentrations resulted in chronic inflammation, lung fibrosis and lung tumors. Epidemiology studies of workers include findings of bronchitis, pneumonia, emphysema and excess cancer. Substances bound in a polymer or other matrix should present little or no hazard.

ACGIH Carcinogens

- Carbon black (CAS 1333-86-4) A3 Confirmed animal carcinogen with unknown relevance to humans.
- Distillates (petroleum, hydrotreated) (CAS 64742-46-7) A2 Suspected human carcinogen.
- Quartz (a component of Basalt) (CAS 14808-60-7) A2 Suspected human carcinogen.
- Titanium dioxide (CAS 13463-67-7) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

- Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.
- Iron oxide (CAS 1309-37-1) 3 Not classifiable as to carcinogenicity to humans.
- Quartz (a component of Basalt) (CAS 14808-60-7) 1 Carcinogenic to humans.
- Titanium dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

US NTP Report on Carcinogens: Known carcinogen

- Distillates (petroleum, hydrotreated) (CAS 64742-46-7) Known To Be Human Carcinogen.
- Quartz (a component of Basalt) (CAS 14808-60-7) Known To Be Human Carcinogen.

12. Ecological Information

<table>
<thead>
<tr>
<th>Ecotoxicological data</th>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Carbon black (CAS 1333-86-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia</td>
<td>5600 mg/l, OECD 202</td>
</tr>
<tr>
<td>Ecotoxicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bioaccumulation /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accumulation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No data available.
13. Disposal Considerations

Disposal instructions
Dispose of contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT
Not regulated as a hazardous material by DOT.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

TDG
Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)
None

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A)
No

Section 311/312 (40 CFR 370)
Yes

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)
Not controlled

Canadian regulations
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status
Controlled

WHMIS classification
D2A - Other Toxic Effects-VERY TOXIC

WHMIS labeling

Inventory status

Country(s) or region  Inventory name                        On inventory (yes/no)*
Australia             Australian Inventory of Chemical Substances (AICS)     No
Canada                Domestic Substances List (DSL)                   No
Country(s) or region | Inventory name | On inventory (yes/no) |
--- | --- | --- |
Canada | Non-Domestic Substances List (NDSL) | No |
China | Inventory of Existing Chemical Substances in China (IECSC) | No |
Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
Europe | European List of Notified Chemical Substances (ELINCS) | No |
Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
Korea | Existing Chemicals List (ECL) | No |
New Zealand | New Zealand Inventory | No |
Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | No |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

State regulations

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance
- Carbon black (CAS 1333-86-4)
- Distillates (petroleum, hydrotreated) (CAS 64742-46-7)
- Iron oxide (CAS 1309-37-1)

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
- Carbon black (CAS 1333-86-4)
- Quartz (a component of Basalt) (CAS 14808-60-7)
- Titanium dioxide (CAS 13463-67-7)

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
- Quartz (a component of Basalt) (CAS 14808-60-7) Listed: October 1, 1988 Carcinogenic.

US - New Jersey RTK - Substances: Listed substance
- Carbon black (CAS 1333-86-4)
- Iron oxide (CAS 1309-37-1)
- Quartz (a component of Basalt) (CAS 14808-60-7)
- Titanium dioxide (CAS 13463-67-7)

US. Massachusetts RTK - Substance List
- Carbon black (CAS 1333-86-4)
- Distillates (petroleum, hydrotreated) (CAS 64742-46-7)
- Iron oxide (CAS 1309-37-1)
- Quartz (a component of Basalt) (CAS 14808-60-7)
- Titanium dioxide (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act
Not regulated.

US. Pennsylvania RTK - Hazardous Substances
- Carbon black (CAS 1333-86-4)
- Distillates (petroleum, hydrotreated) (CAS 64742-46-7)
- Iron oxide (CAS 1309-37-1)
- Quartz (a component of Basalt) (CAS 14808-60-7)
- Titanium dioxide (CAS 13463-67-7)

Mexico regulations
This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

16. Other Information

Further information
HMIS® is a registered trade and service mark of the NPCA.
A HMIS® Health rating including an * indicates a chronic hazard.

HMIS® ratings
- Health: 1
- Flammability: 0
- Physical hazard: 0

NFPA ratings
- Health: 1
- Flammability: 0
- Instability: 0
Disclaimer

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