Material Safety Data Sheet

Material Name: Bonded Perlite Thermal Insulation

Section 1 — Chemical Product and Company Identification

Product Name: Sproule WR-1200® Perlite Insulation
CAS# Mixture/None Assigned
Generic Name: Insulation
Formula: Mixture
Chemical Name: Expanded Perlite

Manufacturer Information
Industrial Insulation Group
2100 Line Street
Brunswick, GA 31520

Phone number for Health and Safety Information: 970.858.6211 (M-F, 7:00a.m. to 4:00p.m., Mountain Time)

Trade Name: Sproule WR-1200 Expanded Perlite Pipe and Block Thermal Insulation

Section 2 — Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
<th>OSHA PEL TLV</th>
<th>ACGIH REL TLV</th>
<th>NIOSH REL UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>93763-70-3</td>
<td>Perlite</td>
<td>&gt;90</td>
<td>15(T)/5(R)</td>
<td>10</td>
<td>10(T)/5(R) mg/m³</td>
</tr>
<tr>
<td>1344-09-8</td>
<td>Sodium Silicate</td>
<td>5-10</td>
<td>15(T)/5(R)</td>
<td>10</td>
<td>NE mg/m³</td>
</tr>
<tr>
<td>57455-37-5</td>
<td>Blue Pigment</td>
<td>&lt;1</td>
<td>15(T)/5(R)</td>
<td>NE</td>
<td>NE mg/m³</td>
</tr>
<tr>
<td>32131-17-2</td>
<td>Nylon 66</td>
<td>0-5</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>63148-62-9</td>
<td>Dimethylpolysiloxanes</td>
<td>0-2</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

NE = Not Established
ACGIH TLVs are 2003 values. OSHA PEL’s and NIOSH REL’s are those in effect on the date of preparation of this MSDS. The listed TLV’s, PELs, and REL’s are time weighted average exposure limits.

Component Related Regulatory Information
This product may be regulated, have exposure limits or other information identified as the following:
Nuisance particulates.

Section 3 — Hazards Identification

Emergency Overview
APPEARANCE AND ODOR: Odorless, blue, solid semi-circle or block insulation with coloring throughout as a visual marker to indicate this is an asbestos-free product.

This product is an article and under normal conditions of use, this product is not expected to create any unusual emergency hazards. However, cutting, sawing, or abrading may increase the risk of personnel exposure.

Inhalation of excessive amounts of dust created when fabricating, cutting, or other mechanical alterations of the product may cause temporary upper respiratory irritation and/or congestion— remove affected individuals to fresh air.

Skin irritation may be treated by gently washing affected area with soap and warm water.

Eye irritation may be treated by flushing eyes with large amounts of water. If irritation persists, contact a physician. Prolonged contact with dust from this product may cause Dermatitis.
In the event of fire, use normal fire fighting procedures to prevent inhalation of smoke and gases.

HMIS Rating: Health: 1, Fire: 0, Reactivity 0, Other: 0  
NFPA Rating: Health:1, Flammability 0, Reactivity 0  
WHMIS Class: Sproule WR-1200 is not a WHMIS controlled product.

Potential Health Effects

Summary
Breathing dust from this product may cause a scratchy throat, congestion, and slight coughing.

Getting dust or fibers on the skin, or in the eyes may cause itching, rash, or redness.

Breathing large amounts of dust or fibers from this product may lead to chronic health effects as discussed in Section 11 of this material safety data sheet.

Inhalation
Irritation of the upper respiratory tract (scratchy throat), coughing, and congestion may occur in extreme exposures.

Skin
Temporary irritation (itching) or redness may occur.

Absorption
Not applicable

Ingestion
This product is not intended to be ingested or eaten under normal conditions of use. If ingested, it may cause temporary irritation to the gastrointestinal (GI) tract, especially the stomach.

Eyes
Temporary irritation (itching) or redness may occur.

Target Organs
Upper respiratory passages, skin, and eyes.

Primary Routes of Entry (Exposure)
Inhalation (breathing dust), skin, and eye contact.

Medical Conditions Aggravated by Exposure
Pre-existing chronic upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

Section 4 — First Aid Measure

First Aid: Inhalation
Remove to fresh air. Drink water to clear throat, and blow nose to remove dust.

First Aid: Skin
Wash gently with soap and warm water to remove dust. Wash hands before eating or using the restroom.

First Aid: Ingestion
Product is not intended to be ingested or eaten. If this product is ingested, irritation of the gastrointestinal (GI) tract may occur, and should be treated symptomatically. Rinse mouth with water to remove fibers, and drink plenty of water to help reduce the irritation. No chronic effects are expected following ingestion.

First Aid: Eyes
Do not rub or scratch your eyes. Dust particles may cause the eye to be scratched. Flush eyes with large amounts of water for 5-15 minutes. If irritation persists, contact a medical professional.

First Aid: Notes to Physician
This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

Section 5 — Fire Fighting Measures

Flash Point: Not applicable  
Method Used: Not applicable

Upper Flammable Limit (UFL): Not applicable  
Lower Flammable Limit (LFL): Not applicable

Auto Ignition: Not determined  
Flammability Classification: Non combustible

Rate of Burning: Not applicable

General Fire Hazard
There is no potential for fire or explosion.
Extinguishing Media
Carbon dioxide (CO2), water, water fog, dry chemical.

Fire Fighting Equipment/Instructions
No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases produced by other materials.

Section 6 — Accidental Release Measures

Containment Procedures
Pick up large pieces. Vacuum dusts. If sweeping is necessary, use a dust suppressant such as water. Do not dry sweep dust accumulation or use compressed air for clean-up. These procedures will help to minimize potential exposures.

Clean-Up Procedures
Wastes are not hazardous as defined by RCRA; 40 CFR 261. Comply with state and local regulations for disposal of these products. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the EPA.

Section 7 — Handling and Storage

Handling Procedures
Use protective equipment as described in Section 8 of this material safety data sheet when handling uncontained material. Good housekeeping practices should be used to prevent generation and accumulation of dusts. After handling product, wash face and hands before eating, drinking, or smoking.

Storage Procedures
Warehouse storage should be in accordance with package directions, if any. Material should be kept dry, and protected from the elements.

Section 8 — Exposure Control and Personal Protection

Personal Protective Equipment

Personal Protective Equipment: Eyes/Face
Safety glasses with side shields are recommended to keep dust out of the eyes.

Personal Protective Equipment: Skin
Leather or cotton gloves should be worn to prevent skin contact and irritation. Barrier creams may also be used to reduce skin contact and irritation.

Personal Protective Equipment: Respiratory
A respirator should be used if ventilation is unavailable, or is inadequate for keeping dust and fiber levels below the applicable exposure limits. In those cases, use a NIOSH-certified disposable or reusable particulate respirator with an efficiency rating of N95 or higher (under 42 CFR 84) when working with this product. For exposures up to five times the established exposure limits use a quarter-mask respirator, rated N95 or higher; and for exposures up to ten times the established exposure limits use a half-mask respirator (e.g., MSA's DM-11, Racal's Delta N95, 3M's 8210), rated N95 or higher. For exposures up to 50 times the established exposure limits use a full-face respirator, rated N99 or higher.

Operations such as sawing, blowing, tear out, and spraying may generate airborne fiber concentrations requiring a higher level of respiratory protection.

Ventilation
In fixed manufacturing settings, local exhaust ventilation should be provided at areas of cutting to remove airborne dust and fibers. General dilution ventilation should be provided as necessary to keep airborne dust and fibers below the applicable exposure limits and guidelines. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.

Personal Protective Equipment: General
Loose-fitting, long-sleeved clothing should be worn to protect the skin from irritation. Exposed skin areas should be washed with soap and warm water after handling.

Section 9 — Physical & Chemical Properties

Appearance: Semi-circle or block insulation with blue coloring throughout as a visual marker to indicate this is an asbestos free product.
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor:</td>
<td>Odorless</td>
</tr>
<tr>
<td>pH:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Physical State:</td>
<td>Solid</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>1000-1200°C</td>
</tr>
<tr>
<td>Solubility (H2O):</td>
<td>Nil</td>
</tr>
<tr>
<td>Freezing Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VOC:</td>
<td>0</td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>0</td>
</tr>
</tbody>
</table>

**Section 10 — Chemical Stability & Reactivity Information**

**Chemical Stability**
This is a stable material. This product is not reactive.

**Hazardous Decomposition**
None.

**Hazardous Polymerization**
Will not occur.

**Section 11 — Toxicological Information**

**Acute Toxicity**

**A: General Product Information**
The primary acute health effects of this product include mechanical irritation of the skin and eyes and skin dryness as a result of contact with dust and fibers.

**B: Component Analysis - LD50/LC50**
No LD50/LC50's are available for this product's components.

**Carcinogenicity**

**A: General Product Information**
OSHA, NTP, IARC, and ACGIH have not classified this product in its entirety as a carcinogen.

**B: Component Carcinogenicity**

**Perlite (93763-70-3)**
ACGIH: A4 - Not Classifiable as a Human Carcinogen

**Section 12 — Ecological Information**

**Ecotoxicity**

**A: General Product Information**
No data available for this product.

**B: Component Analysis - Ecotoxicity - Aquatic Toxicity**
No ecotoxicity data are available for this product's components.

**Section 13 — Disposal Considerations**

**US EPA Waste Number & Descriptions**

**A: General Product Information**
This product, as supplied, is not regulated as a hazardous waste by EPA under RCRA regulations. Comply with state and local regulations for disposal. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the EPA.

**B: Component Waste Numbers**
No EPA Waste Numbers are applicable for this product's components.

**Disposal Instructions**
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

**Section 14 — Transport Information**

**US DOT Information**

**US DOT Information:** This product is not classified a hazardous material for transport.

DOT Label: None Required

Canadian Shipping Description: None

IMO: Not regulated as dangerous goods according to IMDG Code

ICAO: Not regulated as dangerous goods according to ICAO Technical Instructions
Section 15 — Regulatory Information

US Federal Regulations
A: General Product Information
   No information on this product as a whole.

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

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

B: TSCA Status
   No information available for the product.

International Regulations
A: General Product Information

Canada Workplace Hazardous Materials Information System (WHMIS)
   WHMIS Classification: D2B– Irritant
   Product classified as a manufactured article as defined in Hazardous Product Act (HPA), Section 11(1). Section 12(I) exempts it from the WHMIS supplier label and MSDS requirements of the Act.

B: Component Analysis - WHMIS IDL
   No components are listed in the WHMIS IDL.

Section 16 — Other Information

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

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; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act; DSL = Canadian Domestic Substance List; EINECS = European Inventory of New and Existing Chemical Substances; WHMIS = Workplace Hazardous Materials Information System; CAA = Clean Air Act; CHPA = Canadian Hazardous Product Act; IDL = Canadian Hazardous Disclosure List

Revision Summary:
This is a revised MSDS which replaces Revision 1.0.2 with clarified exposure limits and addition of NIOSH REL exposure limits.

Get this and other MSDS forms electronically via Internet: http://www.iig-llc.com or by calling 1-970-858-6200.
As of the date of preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state law(s). However, no warranty or representation with respect to such information is intended or given.

IMPORTANT SAFETY NOTICE: The information in this MSDS relates only to the specific material described herein and does not relate to use in combination with any other material or substance or in any process.

Because of the use of this information and the conditions of use of this product are not within the control of Industrial Insulation Group, it is the users obligation to determine the conditions of safe use of this product.

Users of this product should study this MSDS and become aware of the product hazards and safety information before using this product. Users should also notify their employees, agents, and contractors regarding information contained in this MSDS and any product hazards and safety information in order to provide for safe use of this product.