Section 1: Identification

Product Identifier

Description: Ceramic parts manufactured from Aluminium Silicate
Chemical Product Name: Al₂Si₄O₁₀(OH)₂
Synonyms: L911A, Lava, UF Lava, BF Lava, FF Lava, Pyrophyllite
Material Uses: Ceramics, chemical, refractory and electrical components
CAS#: Refer to Section 2
UN Number: Not regulated
Hazchem Code: Not applicable

Supplier Contact Information

Technical Products, Inc.
PO Box 189
Hubertus, WI 53033

Emergency Phone Information

Technical Products, Inc. 1-262-335-3635

Section 2: Hazards Identification

Classification of the substance or mixture

Hazard Classification
Not classified as hazardous

Label Elements

Human Effects Dust generation may cause eye, skin and respiratory tract irritation
Refer to Section 8.
Environmental Effects Inadequate data available
Biological Hazard Inadequate data available
Flammability No specific fire or explosion hazards
Carcinogenicity Inadequate data available
Mutagenicity Inadequate data available
Teratogenicity Inadequate data available
Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Substances*</th>
<th>CAS</th>
<th>Grey %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al₂O₃</td>
<td>1344-28-1</td>
<td>29.2</td>
</tr>
<tr>
<td>SiO₂**</td>
<td>7631-86-9</td>
<td>59.0</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>-</td>
<td>2.97</td>
</tr>
<tr>
<td>MnO</td>
<td>-</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>MgO</td>
<td>-</td>
<td>&lt;0.5</td>
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<tr>
<td>CaO</td>
<td>-</td>
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</tr>
<tr>
<td>TiO₂</td>
<td>-</td>
<td>1.43</td>
</tr>
<tr>
<td>K₂O</td>
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<td>1.17</td>
</tr>
<tr>
<td>Na₂O</td>
<td>-</td>
<td>0.26</td>
</tr>
<tr>
<td>P₂O₅</td>
<td>-</td>
<td>0.14</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>0.06</td>
</tr>
<tr>
<td>S</td>
<td>-</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>CO₂</td>
<td>-</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Li₂O in ppm</td>
<td>-</td>
<td>17</td>
</tr>
</tbody>
</table>

* Several other trace elements exist, but none considered hazardous to human health or the environment.

** Independent studies indicate variable amounts of rutile, diaspore, mica and kaolinite (Anglo Vaal Mineralogical Laboratory 2001)

** Analysis performed in 2011 confirms that Pyrophyllite mined by Wonderstone has a free silica content of 0.908% (Dr Ansie Bruwer, Pr No. 1522574)

Section 4: First Aid

Description of First Aid Measures

In circumstances where dust may be generated from machining or disposal

Eye Contact
Rinse cautiously with water for several minutes. Remove contact lenses if present, and easy to do. Continue rinsing.

Skin Contact
Wash skin with soap and water. Ingestion Rinse mouth. Inhalation Move to fresh air.
Refer to Section 8.

General Advice
If symptoms persist, call a physician. Show this safety data sheet to doctor in attendance.
Section 5: Fire-Fighting Measures

Extinguishing Media

Suitable extinguishing Media
The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing Media which must not be used for safety reasons
None known

Section 6: Accidental Release Measures

Personal Precautions
Operators should use personal protective equipment (PPE). No action shall be taken involving any personal risk or without suitable training. Refer to Section 8.

Environmental Release Measures
Avoid excessive dust generation. Ensure contaminated run offs are dealt with appropriately, according to approved environmental management plans. Apply limited water to suppress potential dust before collection.

Methods and material for containment and cleaning up
Clean up promptly by scoop or vacuum. Place into appropriate container for disposal.

Section 7: Handling And Storage

Precautions for Safe Handling
In circumstances where dust may be generated from machining or disposal

Handling
Provide appropriate exhaust ventilation at places where dust is formed.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Keep in a dry place.
Control Parameters

Exposure Limits
Applies to circumstances where dust may be generated from machining or disposal

Exposure Controls

Engineering Controls
Ensure adequate ventilation in circumstances where dust may be generated from machining or disposal, especially in confined areas. The material contains 0.9% silica, however should silica measurements exceed 10% of the OEL; the appropriate monitoring and reporting should be undertaken. It is recommended that any person working in close contact with the material should undergo regular medical examinations with a focus on visual and respiratory functions.

Personal protective equipment
In circumstances where dust may be generated from machining or disposal:

Eye Protection
Safety glasses with side-shields.

Hand Protection
No special protective equipment required.

Respiratory Protection
Provide appropriate exhaust ventilation at places where dust is formed. Masks and respirators with appropriate particle filter should be worn.

Environmental Exposure Control
Liquid waste that is considered to be contaminated should be treated at a waste water treatment plant.
Section 9: Information on Basic Physical And Chemical Properties

- **Physical State**: Solid
- **Appearance/ Color**: Grey pyrophyllite is pale grey in color with homogenous appearance whilst black pyrophyllite is dark grey to black rock with patches of light colors.
- **Odor**: None
- **pH**: 7.5 (Estimated value)
- **Melting Point**: Approximately 1630°C
- **Boiling Point**: Decomposes on melting 1630°C
- **Flash Point**: Not applicable for this material as an inorganic substance
- **Relative Density**: 2.68 to 2.72 g/c.c.
- **Solubility in Water**: Insoluble
- **Flammability**: No specific fire or explosion hazards
- **Exposure Properties**: Not known
- **Oxidising Properties**: Not known
- **Vapour Pressure**: Not applicable
- **Viscosity**: Not applicable
- **Organic Solvents**: Insoluble
- **Freezing Point**: Not applicable
- **Explosive Properties**: Not applicable

Section 10: Accidental Release Measures

- **Reactivity**: None reactive *
- **Chemical Stability**: Stable under normal conditions
- **Possibility of Hazardous Reactions**: None known
- **Conditions to Avoid**: Avoid generating excessive fine particles
- **Incompatible Materials**: None known
- **Hazardous Decomposition Products**: None known

* Under normal ambient and storage and handling conditions.
Section 11: Toxicological Information

Bio-Availability
Limited bio-availability expected in solid form

Inhalation
Pyrophyllite dust may cause irritation of eyes and respiratory tract typical of a nuisance dust. Refer to Section 8.

Ingestion
Not toxic. If ingested, apply Section 4 measures.

Dermal
Absorption through the skin is negligible

Sensitisation
No evidence of respiratory or skin sensitisation.

Acute Effects
The product does not contribute to chronic health effects.

Carcinogenicity, Mutagenicity and Toxic to Reproduction (CMR) Effects
The product is not classified as carcinogenic, mutagenic or toxic to reproduction.

Section 12: Ecological Information

Eco Toxicity
Pyrophyllite is not known to have adverse effects to the environment.

Mobility
Not enough information is available to determine mobility in soil.

Persistence and Degradability
Not applicable to inorganic substances.

Bio-accumulation Potential
No information available.

Section 13: Disposal Considerations

Waste disposal
Re-use of pyrophyllite is recommended. In cases where re-use is not possible, the material can be disposed of on a general landfill site according to national and local legal requirements as the material is not considered hazardous.
Section 14: Transport Information

Transport Guidelines  Not regulated

The handling and transportation of this material must be in compliance with applicable legislation.

Section 15: Regulatory Information

Chemical Safety Assessment
A chemical safety assessment is not required as the substance is unclassified.

Handling, Storage and Disposal

Transport

Occupational
Occupational Exposure Limits – Recommend Limits (South Africa, 1995).

MSDS Content
Occupational Health and Safety Act (1993), Hazardous Chemical SubstancesRegulation1179, Aug-95
SANS 10234, 2007: Global Harmonized System of classification and labelling of chemicals (GHS).


Risk Phrases Safety Phrases
R20/22 Harmful by inhalation and if swallowed.
S20 When using material, do not eat or drink
S22 Do not breathe dust.
S25 Avoid contact with eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29 Do not empty into drains.
S36 Wear suitable protective clothing.
Section 16: Other Information

Prepared by: ___________________ Date: 11/2/2017

Updates
The most current version of this Safety Data Sheet is available at this URL: Technical Products, Inc.

Disclaimer
The information contained 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 guidance for safe handling, use, transportation and disposal, and is not to be considered a warranty or quality specification. Technical Products, Inc. assumes no liability to any user based upon use of product or reliance upon the information contained in this Safety Data Sheet.