Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Identifier
Product Name: MAGNESIUM SILICATE, synthetic, amorphous, hydrous
Trade Name: MAGNESOL®
Grades: XL Filter Pad

Recommended Use of the Chemical and Restrictions on Use
Product Use: Adsorbent, filter aid, flow agent
Uses Advised Against: None identified

Supplier Information
Manufacturer: The Dallas Group of America, Inc.
374 Route 22
P.O. Box 489
Whitehouse, NJ 08888
Information Phone: Product Safety Department: 908-534-7800
Fax: 908-534-0084

Emergency Telephone Number
Emergency Information: 908-534-7800 (office hours only)

SDS Date of Preparation: February 19, 2013

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification: Not classified as a hazardous substance under the GHS, or U.S. OSHA 1910.1200, the EU CLP Regulation or WHMIS.

Label Elements: No labeling required

Other Hazards: None

This Safety Data Sheet has been provided for informational purposes only. Since this product is not classified as hazardous, according to 29CFR 1910.1200, the Canadian WHMIS regulation, the GHS and Article 31 of the REACH Regulation (EC) 1907/2006 there is no obligation to provide a SDS for this material.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>EINECS#</th>
<th>GHS Classification</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Silicate</td>
<td>1343-88-0</td>
<td>215-681-1</td>
<td>Not classified as hazardous</td>
<td>50.86</td>
</tr>
<tr>
<td>Cellulose</td>
<td>65996-61-4</td>
<td>265-995-8</td>
<td>Not classified as hazardous</td>
<td>41.40</td>
</tr>
<tr>
<td>FDA Approved Binder</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>Not classified as hazardous</td>
<td>7.74</td>
</tr>
</tbody>
</table>

See Section 16 for further information on EU and GHS Classification.
**SECTION 4: FIRST AID MEASURES**

**Description of First Aid Measures**
- **Eye:** Flush with plenty of water. Obtain medical attention if irritation persists.
- **Skin:** No first aid should be needed. Wash off with soap and water. Get medical attention if irritation develops.
- **Inhalation:** No first aid should be needed. If irritation develops, remove victim to fresh air. Get medical attention if irritation persists.
- **Ingestion:** No first aid should be required. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if large amount is swallowed.

**Most Important symptoms and effects, both acute and delayed:**
Poses little or no health hazard. Pad contents may cause mild, mechanical (abrasive) irritation to the eyes, skin and respiratory tract.

**Indication of any immediate medical attention and special treatment needed:** None required.

**SECTION 5: FIRE FIGHTING MEASURES**

**Extinguishing Media:**
Use any extinguishing media that is suitable for the surrounding fire.

**Specific Hazards Arising from the Chemical**
- **Unusual Fire and Explosion Hazards:** None.
- **Hazardous Decomposition Products:** None.

**Special Protective Equipment and Precautions for Fire-Fighters:**
None required. Use procedures and equipment appropriate for other materials in the fire area.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures:**
Wear appropriate protective equipment. Avoid creating and breathing dust.

**Environmental Precautions:**
Avoid unintentional release to the environment.

**Methods and Material for Containment and Cleaning Up:**
Pick up pads. Sweep or vacuum pad contents, if released; the use of a sweeping compound/dust suppressant is suggested. Dampening with water can reduce dust.

**Reference to Other Sections:**
Refer to Section 8 for protective equipment. Refer to Section 13 for disposal guidance.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling:**
Avoid damaging pads. Avoid contact with the eyes. Avoid creating and breathing dust.

**Conditions for Safe Storage, Including any Incompatibilities:**
Keep containers closed when not in use.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Silicate (as particulates not otherwise specified)</td>
<td>5 mg/m³ (respirable) 8-hour TWA U.S. OSHA PEL 3 mg/m³ (respirable) 8-hour TWA ACGIH TLV 15 mg/m³ (total) TWA U.S. OSHA PEL</td>
</tr>
<tr>
<td>Cellulose</td>
<td>5 mg/m³ (respirable) 8-hour TWA U.S. OSHA PEL 15 mg/m³ (total) TWA U.S. OSHA PEL 10 mg/m³ 8-hour TWA ACGIH TLV</td>
</tr>
<tr>
<td>FDA Approved Binder</td>
<td>None Established</td>
</tr>
</tbody>
</table>

Refer to local regulations for specific requirements.

Exposure Controls:
- **Engineering Controls:** Use with adequate general or local ventilation to minimize airborne exposures.
- **Eye and Face:** Follow facility requirements. Safety glasses with side shields should be used if there is a potential for chemical to get into eyes. Dust goggles recommended for dusty conditions.
- **Skin:** None required.
- **Respiratory:** Not necessary if airborne workplace concentrations of chemical are below recommended limits. If the airborne exposure levels are excessive, a respirator approved by the local authority for the conditions of use (NIOSH in the U.S.) should be worn. Respirator selection and use should be based on contaminant type, form and concentration. Follow and applicable regulations (OSHA 1910.134 in the U.S.) and standards (ANSI Z88.2 in the U.S.) and good Industrial Hygiene practice.
- **Protective Clothing:** None required under normal use conditions.
- **Work Hygienic Practices:** No special requirements.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Appearance</th>
<th>Odor: Odorless</th>
<th>Odor Threshold</th>
<th>Relative Density</th>
<th>Melting Point: 1910°C (3470°F) (magnesium silicate)</th>
<th>Water Solubility: 127-268 mg/L (expressed as total oxides) @30°C (magnesium silicate)</th>
<th>Evaporation Rate</th>
<th>Pour Point: Not applicable</th>
<th>Flammable Limits: LEL: None</th>
<th>Flammable Limits: UEL: None</th>
<th>Flammability (solid/gas): None</th>
<th>Decomposition Temperature: None</th>
<th>Partition Coefficient: n-octanol/water: Not applicable</th>
<th>Viscosity: Not applicable</th>
<th>Flash Point: None</th>
<th>Explosive Properties: None</th>
<th>Oxidizing Properties: None</th>
</tr>
</thead>
</table>

SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** Not reactive
- **Chemical Stability:** Stable under normal conditions.
Possibility of Hazardous Reactions: None known.

Conditions to Avoid: None known.

Incompatible Materials: Avoid contact with Strong acids and Hydrogen Fluoride.

Hazardous Decomposition Products: None

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects:
   Eye: May cause temporary discomfort.
   Skin: No hazardous effects expected.
   Skin Absorption: No evidence of adverse effects from available information.
   Ingestion: May cause gastrointestinal discomfort if ingested in large quantities.
   Inhalation: No hazardous effects expected.
   Chronic Toxicity: No adverse effects expected.

Acute Toxicity Data:
Magnesium Silicate: LD50 oral rat >5000 mg/kg. LD50 dermal rabbit >2000 mg/kg (no adverse effects were observed at maximum dose). LC50 inhalation rat >20 mg/L/1 hour (no adverse effects were observed).

Skin corrosion/irritation: Magnesium Silicate: Not irritating to rabbit skin.

Eye damage/ irritation: Magnesium Silicate: Not irritating to rabbit eyes (OECD 405).

Skin Sensitization: Magnesium Silicate: Not a skin sensitizer based on human experience.

Respiratory Sensitization: No data available. Not expected to be a respiratory sensitizer based on human experience.

Germ Cell Mutagenicity: Magnesium Silicate: Based on data from a supporting substance, this material is not expected to cause germ cell mutagenicity.

Carcinogenicity: Magnesium Silicate: This material is not listed as a potential carcinogen by IARC or EU CLP Annex VI. Based on data from similar materials, this material is not expected to increase the risk of cancer.

Developmental / Reproductive Toxicity: Magnesium Silicate: Based on data from similar materials, this material is not expected to cause adverse effects on reproduction or development.

Specific Target Organ Toxicity (Single Exposure): Magnesium Silicate: No adverse effects were observed in an acute inhalation toxicity study.

Specific Target Organ Toxicity (Repeated Exposure): Magnesium Silicate: Based on data from similar materials, this material is not expected to cause toxic effects on repeated exposure.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:
Magnesium Silicate: Based on test data for a similar substance, this material is not expected to be toxic to aquatic organisms.

Persistence and Degradability:
Biodegradation is not applicable for inorganic substances.
Bioaccumulative Potential:
Not expected to bioaccumulate.

Mobility in Soil:
No mobility in soil is expected.

Other Adverse Effects: None known

SECTION 13: DISPOSAL INFORMATION

Waste Treatment Methods
Disposal Method: In the form supplied, magnesium silicate is not classified as a hazardous waste in the U.S. or EU. Magnesium silicate may undergo normal non-hazardous waste disposal. Dispose in accordance with all local, state and federal regulations.
Empty Container: No special handling or disposal is required.
General Comments: It is the responsibility of the user of this product to characterize wastes generated to determine if the waste meets the definition of hazardous waste. The product uses, transformations, synthesis, mixtures, etc., may render the resulting end product subject to regulation. See Section 16 for additional information on filter cakes.

SECTION 14: TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>UN Number</th>
<th>UN Proper Shipping Name</th>
<th>Transport Hazard Class(s)</th>
<th>Packing Group</th>
<th>Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>US DOT</td>
<td>None</td>
<td>Not regulated</td>
<td>None</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>EU ADR/RID</td>
<td>None</td>
<td>Not regulated</td>
<td>None</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IMDG</td>
<td>None</td>
<td>Not regulated</td>
<td>None</td>
<td>None</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Special Precautions for User: None

SECTION 15: REGULATORY INFORMATION

Safety, Health and Environment Regulations:

US Regulations:
EPA SARA 311/312 Hazard Classification: Not Hazardous

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Protection Of Stratospheric Ozone: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA Section 103: This product is not subject to CERCLA spill reporting requirements. Many states have more stringent release reporting requirements. Report spills when required under federal, state and local regulations.

California Proposition 65: This product is not known to contain chemicals regulated under Proposition 65.

Canadian Regulations:
Canadian WHMIS: Not a controlled product.
This product has been classified in accordance with the hazard criteria in the CPR and the MSDS contains all the information required by the CPR.

**Chemical Inventories:**

**US TSCA**: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or are exempt.

**Canadian CEPA**: All of the components are listed on the Canadian DSL or are exempt.

**EU EINECS**: All of the components are listed on the EINECS inventory or are exempt.

**Australia**: All of the components are listed on the AICS inventory or are exempt.

**China**: All of the components are listed on the Chinese chemical inventory or are exempt.

**Philippines**: All the components are listed in the Philippine Inventory.

**New Zealand**: All of the components are listed on the New Zealand Inventory of Chemicals.

**Korea**: All of the components are listed on the Korean Existing Chemicals Inventory.

**Japan**: All the components are listed on the Japan Inventory of existing chemicals.

**SECTION 16: OTHER INFORMATION**

International Numbering System (INS) number: 553i
European Union E number: E553a(i)

**Note**: In sufficient quantity, a filter cake composed of a flammable organic liquid absorbed on synthetic magnesium silicate or other filter materials such as diatomaceous earth, Perlite, or natural clays may be self-heating or possibly pyrophoric.

**GHS/CLP Hazard Classes and Statements for Reference (See Sections 2 and 3)**: None

**SDS Date of Preparation/Revision**: April 5, 2013

**Revision History**: Conversion to GHS format. Changes in all Sections.

**References**:

A. REACH Registration Dossier 2013
B. NLM Hazardous Substances Databank
C. Magnesium silicate is not listed in:
   2. Industrial Hygiene and Toxicology, F. A. Patty
   3. Industrial Toxicology, Alice Hamilton and Harriet Hardy
   4. Toxicology of the Eye, W. Morton Grant
   5. Dangerous Properties of Industrial Materials, Sax and Lewis
   6. Government Publications:
      a. NIOSH/OSHA Pocket Guide to Chemical Hazards
      b. Registry of Toxic Effects of Chemical Substances
      c. The Industrial Environment - It's Evaluation and Control

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