Material Safety Data Sheet

3/8” Bentonite Chips

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name: 3/8” Bentonite Chips
Chemical Name & Synonyms: Hydrous Silicate of Alumina /
Wyoming Sodium Bentonite/Sodium Montmorillonite

Date Revised: 10/2010
CAS #: 1302-78-9

Supplier:

NOV FluidControl
4310 N. Sam Houston Parkway E
Houston, TX 77032
Office: (713) 482-0500
Fax: (713) 482-0695
Company website: www.nov.com

Emergency Telephone Number:
CHEMTREC: 1-800-424-9300 or International +1-703-527-3887

II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS#</th>
<th>%</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica in the form of Quartz</td>
<td>14808-60-7</td>
<td>&gt;1</td>
<td>PEL - See Below</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TLV - 0.05 mg/m3 TWA (respirable fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MSHA - See Below</td>
</tr>
</tbody>
</table>

OSHA PEL and MSHA Exposure Limit for
Crystalline Silica Quartz:
10mg/m3 % Silica + 2 (Respirable)

National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m³) as determined by a full shift sample up to 10 hour working day, 40 hours per week. The 1974 NIOSH Criteria for a recommended Standard for Occupational Exposure to Crystalline Silica should be consulted for more detailed information.

PEL means OSHA Permissible Exposure Limit.
TLV means American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value.
MSHA means Mine Safety and Health Administration Exposure Limit.
TWA means 8 hour time weighted average.

Note: The Permissible Exposure Limits (PEL) reported above are the pre-1989 limits that were reinstated by OSHA June 30, 1993 following a decision by the 11th Circuit Court of Appeals. Federal OSHA is now enforcing these PELs. Be aware that more restrictive exposure limits may be enforced by some states, agencies or other authorities.
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III. PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point °F: N/A
Specific Gravity: 2.6
Vapor Pressure: N/A
Evaporation Rate: N/A
Solubility In Water: Negligible

Color: Yellow, Blue, Brown
Odor: Earthy Odor
Appearance: Granules or Powder
Density: @ 20° C: Uncompacted: 71 lbs/cubic foot

IV. FIRE & EXPLOSION HAZARD DATA

FLASH POINT: Not Applicable
FLAMMABLE LIMITS: Non Flammable
Extinguishing Media: Use extinguishing media appropriate to the surrounding fire. Special Protective Equipment: None other than those suitable for the surrounding fire conditions.
Unusual Fire/Explosion Hazards: None known.

V. HEALTH HAZARD DATA

<table>
<thead>
<tr>
<th>1 Health Hazard</th>
<th>DEGREE OF HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Flammability</td>
<td>4 = EXTREME</td>
</tr>
<tr>
<td>0 Reactivity</td>
<td>3 = High</td>
</tr>
<tr>
<td>2 = Moderate</td>
<td></td>
</tr>
<tr>
<td>1 = Slight</td>
<td></td>
</tr>
<tr>
<td>0 = Insignificant</td>
<td></td>
</tr>
</tbody>
</table>

Skin: Potential irritant.
Eye: Potential irritant.
Inhalation: Irritation to lungs, nose, and throat

VI. EMERGENCY FIRST AID PROCEDURES

Eyes: Flush with water
Skin: Wash with soap and water
Inhalation: If inhaled and effects occur, move to fresh air. If breathing is irregular administer oxygen.

VII. REACTIVITY DATA

Conditions Contributing to Instability: Stable
Hazardous Polymerization: Will not occur.
Hazardous Decomposition Products: None
VIII. SPILL & DISPOSAL PROCEDURES

STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED: If uncontaminated, sweep up or collect, and reuse product. Product becomes slippery when wet.

WASTE DISPOSAL METHOD: Dispose of in accordance with all Federal, State and Local regulations.

NEUTRALIZING CHEMICALS: Not Applicable

IX. PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Use NIOSH approved mechanical filter respirator for nontoxic dusts if dust concentration exceeds 10mg/m³

VENTILATION: Sufficient to keep dust levels below the TLV for crystalline silica.

PROTECTIVE GLOVES: General duty work gloves.

EYE PROTECTION: If high dust conditions exist, tight fitting goggles are recommended.

OTHER PROTECTIVE EQUIPMENT: Eyewash

X. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store out of the weather. Product becomes slippery when wet. Avoid contact with water in walk areas.

OTHER PRECAUTIONS

PROPER SHIPPING NAME: Not Regulated

PLACARDS: None

HAZARD CLASS: Not Hazardous

REPORTABLE QUANTITY: None

HAZARDOUS SUBSTANCE: None

ID NUMBER: None

XI. TOXICOLOGICAL INFORMATION

Skin Irritation: Not irritant to skin.

Eyes Irritation: Mild irritation to eyes (according to the modified Kay & Calandra criteria).

Acute Oral Toxicity: By analogy to similar materials, the acute LD₅₀ (rat) is expected to be >5000 mg/kg.

Carcinogenicity: IARC, NTP, OSHA or ACGIH does not list Bentonite as a carcinogen.

Reproductive Toxicity: No data for product. No effects anticipated

Teratogenicity: No data for product. Not effects anticipated.

CARCINOGENICITY - SEE ROUTES OF EXPOSURE AND EFFECTS (BELOW)

Inhalation: Breathing prolonged and excessive amounts of Bentonite dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects:
Pneumoconiosis: Excessive inhalation of respirable dust may cause pneumonoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, nonspecific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with pneumoconiosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Other Data with Possible Relevance to Human Health:
There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. For further information consult "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine Volume 155, pages 761-768, 1997.

XII. REGULATORY INFORMATION

SARA requires the submission of annual reports of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS that are re copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

<table>
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<tr>
<td>NONE</td>
<td>N/A</td>
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Toxic Substances Control Act: The ingredients of this product are on the TSCA inventory. Quartz is a Canadian WHMIS (Workplace Hazardous Material Information System) Ingredient Disclosure List, Massachusetts Substance List, New Jersey Right to Know Hazardous Substance List, and Pennsylvania Hazardous Substance List.

SARA 311/312: Hazard Categories for SARA Section 311/312 Reporting: Chronic Health
SARA 313: This Product contains the following chemicals subject to annual release reporting requirements under the SARA Section 313 (40 CFR 372): None
CERCLA Section 103 Reportable Quantity: None

California Proposition 65: In 1999, after extensive analysis, the California Office of Health Hazard Assessment determined that there is no adverse health risk associated with the occurrence of crystalline silica in sorbent mineral based pet litter. This determination exempts cat litter from the proposition 65 warning requirements.

Toxic Substances Control Act: All of the components of this product are listed on the EPA TSCA Inventory or are exempt from the notification requirements.
European inventory of Commercial Chemical Substances: All the components of this product are listed on the EINECS Inventory or exempt from the notification requirements. (The EINECS number for Quartz: 231-545-5.)
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REGULATORY INFORMATION CONTINUED

Canadian Environmental Protection Act: All the components of this product are listed on the Canadian Domestic Substances List or exempt from the notification requirements.
Japan MITI: all the components of this product are existing chemical substances as defined in the Chemical Substance Control Law.
Australian Inventory of Chemical Substances: All the components of this product are listed on the AICS Inventory or exempt from the notification requirements.
Canadian WHMIS Classification: This product contains crystalline silica (respirable), classified as a Class D, Division 2, Subdivision A substance.

XIII. ECOLOGICAL INFORMATION

No specific adverse effect known.

XIV. TRANSPORTATION INFORMATION

DOT – Proper Shipping Name: Not a DOT/MO Hazardous Material
Road Transport ADR/RID: Not a dangerous substance as defined in the above regulations.
Inland Navigation AND/ADNR: Not a dangerous substance as defined in the above regulations.
Maritime Transport IMDG: Not a dangerous substance as defined in the above regulations.
Air Transport ICAO/IATA: Not a dangerous substance as defined in the above regulations.

XV. OTHER INFORMATION

Training: Workers (and your customers or users in case of resale) must be informed of the presence of crystalline silica and the potential hazards. Provide appropriate training in the proper use and handling of the product as required under applicable regulations.

DISCLAIMER:
Although the information and recommendations set forth herein (hereinafter “Information”) are presented in good faith and believed to be correct as of the date hereof, NOV FluidControl, makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the person receiving this MSDS will make own determination as to its suitability for their intended purpose prior to use. Since the product is within the exclusive control of the user, it is the user’s obligation to determine the conditions of safe use of this product. Such conditions should comply with all Federal Regulations concerning the Product. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE ARE MADE HERUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

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