SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: WOLLASTONITE
Various grades, untreated

Synonyms: Calcium silicate

Manufacturer: Xinyu South Wollastonite Co., Ltd
Address: Renhe Town, Xinyu City,
Jiangxi Province, China
Phone: 0086-790-6710815
Fax: 0086-790-6719019
Zip Code: 338021
Email: xynf@xynf.cn
www.xynf.cn

MSDS Number: NFW2010
Revision: 1
Date Issued: 2010/02/01

SECTION II – HAZARD OF IDENTIFICATION

Specific Risks: Airborne particulate created during handling is considered nuisance dust and should be minimized through the use of good work practices and adequate ventilation (see sections VII and VIII for suggested handling and engineering controls).

HMIS Rating: Health: 1     Flammability: 0     Physical Hazard: 0
Personal Protection: B

Primary Routes of Entry: Via respirable dust to the lungs and respiratory system and via coarse dust and particulate to the eyes.

Primary Target Organs: Lungs, respiratory system and eyes.

Potential Health Effects:

- **Inhalation:** Irritating to the mucous membranes and respiratory tract. Excessive exposures to dust may cause sore throat, coughing or upper respiratory irritation.

- **Skin Contact:** Possible dryness or irritation resulting from long term exposures to product dust.

- **Eye Contact:** A mechanical irritant which can cause moderate to severe eye irritation.

- **Ingestion:** Non-hazardous when ingested. Prolonged or repeated exposure may be irritating to mouth, throat and esophagus (sore throat, nausea and retching). Potentially a mild irritant to the GI tract if excessive quantity is ingested.
Medical Conditions Aggravated by Exposure:  Pre-existing chronic upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

Carcinogenicity:  This product is not classified by NTP or OSHA.  IARC classifies wollastonite as Group 3: Unclassifiable as to carcinogenicity to humans.

### SECTION Ⅲ - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>EINECS No.</th>
<th>%</th>
<th>TLV</th>
<th>PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural wollastonite</td>
<td>13983-17-0</td>
<td>237-772-5</td>
<td>&gt;97.5</td>
<td>10 mg/m³</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 mg/m³</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

### SECTION IV - FIRST AID MEASURES

**Inhalation:** Remove to fresh air. Drink water to clear throat and blow nose to evacuate dust. If coughing and irritation develop, call a physician.

**Eye Contact:** Flush with large amounts of water until irritation subsides, as least 15 minutes. See a physician if irritation persists.

**Skin Contact:** Normal good personal hygiene practices. Wash with mild soap and warm water after each exposure.

**Ingestion:** Emergency procedures not normally required. May be a temporary irritant to the GI system.

### SECTION V - FIREFIGHTING MEASURES

**NFPA Rating:** Health: 0  Flammability: 0  Instability: 0

**Special Hazards:** 0

**Flashpoint and Method:** This is a non-flammable product.

**Extinguishing Method:** Not applicable. Product will not burn.

**Special Firefighting Procedures:** Not applicable.

**Fire or explosion Hazards:** None.

### SECTION VI - ACCIDENTAL RELEASE MEASURES

**Clean-up Procedures:** Avoid creating airborne dust. Dust suppressing cleaning methods such as wet sweeping or vacuuming should be used to clean the work area. If vacuuming, the vacuum must be equipped with an efficient secondary filter (such as a HEPA filter). Compressed air or dry sweeping should not be used for cleaning. Scoops or shovels may
be used to minimize dust. Use respiratory protection in dusty conditions.

**Personal Precautions:** If dusty conditions exist, wear a face mask approved for use with dusts such as 3M 8511, N-95 or equivalent.

**Environmental Precautions:** None normally required. Product contains naturally occurring minerals.

### SECTION VII - HANDLING AND STORAGE

**Storage Requirements:** Store in dry area in sealed containers. Always segregate materials by major hazard class.

**Special Sensitivity or Incompatibility:** Avoid contact with strong acids.

**Handling Precautions:** When handling the product, avoid exposure, assure proper respiratory protection if dust potential exceeds PEL/TLV. Limit use of power tools unless in conjunction with local exhaust. Use hand tools whenever possible. Frequently clean the work area with HEPA filtered vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up. Good housekeeping practices should be employed to prevent generation and accumulation of dusts.

### SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

**General Information:** The manufacturer has not established a specific recommended exposure guideline for wollastonite. As with most industrial materials, it is prudent to minimize unnecessary exposure to respirable dusts. Note that industrial hygiene standards and occupational exposure limits differ between countries and local jurisdictions. Check with your employer to identify any “respirable dust”, “total dust” or “fiber” exposure standards to follow in your area. If no regulatory dust or fiber control standard apply, a qualified industrial hygiene professional can assist with a specific evaluation of workplace conditions and the identification of appropriate respiratory protection practices.

**Respiratory Protection:** For dust concentrations below the applicable exposure limit value, personal protection equipment is not required. If PEL/TLV is exceeded, wear an approved face mask such as 3M 8511, N-95 or equivalent, to protect against dust. The evaluation of workplace hazards and appropriate respiratory protection is best performed on a case by case basis, by a qualified industrial hygienist.

**Eye Protection:** Wear safety glasses with side shields or goggles to protect eyes against dust and particulate matter.

**Skin Protection:** Under normal conditions use of protective gloves and clean, body-covering clothing are adequate.
**Engineering Controls:** Maintain sufficient mechanical or natural ventilation to assure dust concentrations remain below PEL/TLV. Dust suppressing control technologies such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling tool designs, and materials handling equipment are effective means of minimizing airborne fiber emissions. The need for ventilation should be evaluated by a professional industrial hygienist. Ventilation systems should be designed by a professional engineer.

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**SECTION IX - PHYSICAL and CHEMICAL PROPERTIES**

**Physical Form:** White, free flowing non-metallic mineral powder, No characteristic odor.

**Melting Point/Melting range:** 1480-1540°C  
**Boiling point:** Not applicable

**Density:** 2.95 g/mL  
**Solubility in Water:** 0.01 g/100 cc

**PH:** 9  
**Aqueous Solution**

**Flammability:** Not applicable

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**SECTION X - STABILITY and REACTIVITY**

**Stability:** Product is stable under normal conditions.

**Hazardous Polymerization:** Cannot occur.

**Incompatibilities:** None in designed use.

**Conditions to Avoid:** None in designed use.

**Decomposition Products:** No hazardous products of decomposition.

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**SECTION XI - TOXICOLOGICAL INFORMATION**

**LD50:** N/A  
**LC50:** N/A

**Toxicology and Epidemiology Overview:**

A review on the toxicology and epidemiology of wollastonite was published in 2005 in the journal *Inhalation Toxicology* (Maxim and McConnell, 2005; see references in Section XVI). In general, studies have focused on the effects of wollastonite on the lungs and have been negative for pulmonary fibrosis, lung cancer, or mesothelioma.

Maxim and McConnell (2005) conclude that there is inadequate evidence for the carcinogenicity of wollastonite in animals and, based on strong evidence that wollastonite is not biopersistent, believe that a well-designed animal inhalation bioassay would have a negative result. The epidemiological evidence for wollastonite is limited, but does not suggest that workers are at significant risk of an increased incidence of pulmonary fibrosis, lung cancer, or mesothelioma. Morbidity studies have demonstrated a non-specific
increase in bronchitis and reduced lung function.

**Toxicological Hazards:**

The International Agency for Research on Cancer (IARC) has classified wollastonite as Group 3: Unclassifiable as to carcinogenicity to humans.

The Australian National Occupational Health and Safety Commission (NOHSC) noted that “there is sufficient evidence for the non-toxicity and non-carcinogenicity of wollastonite fibers in experimental animals” and that there is “inadequate evidence for the toxicity and carcinogenicity of wollastonite fibers in humans.” (Douglas, 2001; see reference in Section XVI).

The German MAK Commission evaluation states: In all probability, wollastonite fibers do not have any carcinogenic affects.

**Teratogenicity, Mutagenicity, other Reproductive Effects:** None known.

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**SECTION XII - ECOLOGICAL INFORMATION**

**Ecological Hazards:** Wollastonite is a naturally occurring mineral. Unless contaminated in service, this product is neutral to the environment. Wollastonite is listed a with a Wassergefährdungsklasse (WGK) hazard of nwg(nicht wassergefährdend) under the German Federal Water Management Act.

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**SECTION XIII - DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Wollastonite is not classified as a hazardous waste according to Federal regulations (40 CFR 261). Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Wollastonite may be disposed in an approved landfill unless contaminated in service. If contaminated with hazardous materials, place waste in suitable container. Seal and properly label the waste container. Send the container to an approved Transportation, Storage and Disposal (TSD) facility via an approved waste hauler. Be sure manifests have been completed and an adequate "Paper trail" has been established.

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**SECTION XIV - TRANSPORTATION INFORMATION**

**ADR/RID Class:** Not regulated

**UN/NA Number:** None

**DOT Label:** None

**AND/R Class:** Not regulated

**IMDG Class:** Not regulated

**UN Number:** Not applicable
International Dangerous Goods Information:
    IMO: Not regulated as dangerous goods according to the IMDG Code.
    ICAO: Not regulated as dangerous goods according to the IACO Technical Instructions.

SECTION XV - REGULATORY INFORMATION

Refer to Section II for occupational exposure limits in US

International Occupational Exposure Limits:
    Great Britain 10 mg/m$^3$ (total inhalable dust); 4 mg/m$^3$ (respirable dust)
    Austria 10 mg/m$^3$ (total dust)
    France 10 mg/m$^3$ (general dust)
    Ireland 10 mg/m$^3$ (total dust); 4 mg/m$^3$ (respirable dust)
    Poland 4 mg/m$^3$ (total dust)
    Denmark 1 fiber/cm$^3$ (wollastonite)
    Sweden 0.5 fibers/ml (natural fibers)
    Canada, Quebec 1 fibre/cm$^3$ (wollastonite TWAEV)

International Inventory Listings:
    China: IECSC: Wollastonite is included in the Inventory of Existing Substances in China.
    Australia: AICS: Wollastonite is included in the Australian Inventory of Chemical Substances, June 1996 Ed..
    Canada: DSL: As a naturally occurring substance, wollastonite is considered to be on the Canadian Domestic Substances List (DSL).
    China: IECSC: Wollastonite is included in the Inventory of Existing Substances in China.
    EEC: EINECS/ELINCS: All components of this product are included in the EINECS AND ELINCS EEC Chemical Inventories.
    IUCLID: Chemical information on wollastonite has been submitted for inclusion in the International Uniform Chemical Information Database.
    67/548/EEC: ALTox a/s has on 27/7/98 evaluated and determined that wollastonite is not to be classified according to EEC directive (67/548/EEC).
    95/3/EC, Annex III: Listed for use in "Plastic materials and articles intended to come into contact with foodstuffs.
    Japan: ENCS: Wollastonite is exempt from the list of Existing and New Chemical Substances as a naturally occurring mineral.
    Korea: ECL: Wollastonite is included in the Korean Existing Chemical List, ECL Number KE-35416.
    Philippines: PICCS: Wollastonite is included in the Philippine Inventory of Chemicals and Chemical Substances.
    USA: EPA-TSCA: Wollastonite is exempt from the TSCA Inventory as a naturally
occurring mineral. All proprietary surface treatments are included on the *TSCA Inventory*.

EPA-CERCLA Reportable Quantity: N/Ap.
EPA-SARA Title III: Substances in this product are not reportable under Section 313.
EPA-FIFRA: Wollastonite is present on the list of Pesticide Product Inert Ingredients.

### SECTION XVI - OTHER INFORMATION

**References:**


**Prepared by xinyu south wollastonite co.,ltd:** The foregoing information has been compiled by xinyu south wollastonite co.,ltd from sources it considers reliable and as of the date of this document, is believed to be accurate to the best of ours knowledge. Before using the product identified hereon, all of the foregoing information should be carefully considered. The information herein applies only to the product identified hereon and does not relate to its use in combination with any other material or in any process. The information is provided in good faith to comply with applicable laws. However, no warranty or representation of law or fact, with respect to such information, is intended or given.

**Approval Date:** 01/ Jan/2010

**Reason for Issue:** New Section IX information, general update.

**Supersedes Date:** 30 January 2008

**Issued By:**

Xinyu South Wollastonite Co., Ltd.

1. This file is considered invalidated without the seal of xinyu south wollastonite co.,ltd
2. This file and the date must not be used in legal affairs.
3. We have the right to revise the data in the situation of general update

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