Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier
Product Name: Asbestos, Chrysotile
Synonyms: Chrysotile Asbestos; Serpentine chrysotile; White asbestos
Product Code: 02107A-AB; 02701-AB; 02740A-AB; 02740-AB

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified use(s): Laboratory standard in the microscopy laboratory

1.3 Details of the supplier of the safety data sheet
Manufacturer: SPI Supplies Division Structure Probe, Inc.
206 Garfield Ave.
West Chester, PA 19380
United States
http://www.2spi.com
SDS@2spi.com

Telephone (General): 1-(610)-436-5400

1.4 Emergency telephone number
Manufacturer: 1-(800)-424-9300 - Chemtrec
Manufacturer: 1-(703)-741-5970 - Worldwide

Section 2: Hazards Identification

EU/EEC

2.1 Classification of the substance or mixture
CLP
• Carcinogenicity 1A - H350
Specific Target Organ Toxicity Repeated Exposure 1 - H372

2.2 Label Elements
CLP
DANGER

Hazard statements
• H350 - May cause cancer.
• H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements
Prevention
• P201 - Obtain special instructions before use.
• P202 - Do not handle until all safety precautions have been read and understood.
• P260 - Do not breathe dust.
• P264 - Wash thoroughly after handling.
2.3 Other Hazards

CLP

- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Carcinogenicity 1A
- Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements

- May cause cancer.
- Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.

Response

- IF exposed or concerned: Get medical advice/attention.
- Get medical advice/attention if you feel unwell.

Storage/Disposal

- Store locked up.
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012


Section 3 - Composition/Information on Ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
<th>LD50/LC50</th>
<th>Classifications According to Regulation/Directive</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos, chrysotile</td>
<td>CAS:12001-29-5, EU Index:650-013-00-6</td>
<td>&gt; 99.99%</td>
<td>NDA</td>
<td>EU CLP: Annex VI, Table 3.1: Carc. 1A, H350; STOT RE 1, H372 **</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Carc. 1A; STOT RE 1 (Lungs)</td>
<td></td>
</tr>
</tbody>
</table>
3.2 Mixtures

• Material does not meet the criteria of a mixture.

**Section 4 - First Aid Measures**

4.1 Description of first aid measures

Inhalation
• Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. If signs/symptoms continue, get medical attention.

Skin
• Wash skin with soap and water. Flush with copious amounts of water for 15 minutes.

Eye
• In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. Get medical attention immediately.

Ingestion
• Obtain medical attention immediately if ingested.

4.2 Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician
• All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**Section 5 - Firefighting Measures**

5.1 Extinguishing media

Suitable Extinguishing Media
• Water, Foam, Dry Chemical.

Unsuitable Extinguishing Media
• No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
• Negligible fire and explosion hazard. Toxic gases and asbestos particulate may be released in a fire.

Hazardous Combustion Products
• No data available

5.3 Advice for firefighters

• Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

**Section 6 - Accidental Release Measures**

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions
• Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

Emergency Procedures
• As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away.

6.2 Environmental precautions

• Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up
• Avoid generating dust.
Measures

Use HEPA vacuum wet methods when feasible. Carefully shovel or sweep up spilled material and place in suitable container.

6.4 Reference to other sections

• Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

• Use only with adequate ventilation. Minimize dust generation and accumulation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

• Store in well-sealed container in cool, dry area in accordance with all current regulations and standards.

7.3 Specific end use(s)

• This item is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption. Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Exposure Limits/Guidelines</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos, chrysotile (12001-29-5) TWAs</td>
<td>0.1 fiber/cm³ TWA</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering Measures/Controls

• Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal Protective Equipment

Respiratory

• For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

• Wear safety goggles.

Skin/Body

• Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls

• Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Additional Protection Measures

• An eyewash station and emergency shower must be available to the work station.

Key to abbreviations

NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures
### Section 9 - Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Physical Form</th>
<th>Appearance/Description</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solid</td>
<td>White, gray, greenish, or yellowish, odorless, fibrous solid.</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Color</td>
<td>White, gray, greenish, or yellowish.</td>
<td>Odorless</td>
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</table>

<table>
<thead>
<tr>
<th>General Properties</th>
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</thead>
<tbody>
<tr>
<td>Boiling Point</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
</tr>
<tr>
<td>Specific Gravity/Relative Density</td>
</tr>
<tr>
<td>Viscosity</td>
</tr>
<tr>
<td>Oxidizing Properties:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Pressure</td>
</tr>
<tr>
<td>Evaporation Rate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flammability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
</tr>
<tr>
<td>LEL</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octanol/Water Partition coefficient</td>
</tr>
</tbody>
</table>

#### 9.2 Other Information

- No additional physical and chemical parameters noted.

### Section 10: Stability and Reactivity

#### 10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

#### 10.2 Chemical stability

- Stable under normal temperatures and pressures.

#### 10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

#### 10.4 Conditions to avoid

- Avoid generating dust.

#### 10.5 Incompatible materials

- Strong oxidizers, strong acids, and bases.

#### 10.6 Hazardous decomposition products

- None known.
### 11.1 Information on toxicological effects

#### Components

<table>
<thead>
<tr>
<th>Asbestos, chrysotile (&gt; 99.99%)</th>
<th>12001-29-5</th>
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</thead>
<tbody>
<tr>
<td>Multi-dose Toxicity: Inhalation-Hamster TCLo • 30 mg/m³ 6 Hour(s) 78 Week(s)-Intermittent; Lungs, Thorax, or Respiration: Fibrosis (interstitial); Lungs, Thorax, or Respiration: Changes in lung weight; Inhalation-Rat TCLo • 8210 µg/m³ 6 Hour(s) 20 Day(s)-Intermittent; Lungs, Thorax, or Respiration: Fibrosis (interstitial); Tumorigen / Carcinogen: Ingestion/Oral-Rat TDLo • 7100 mg/kg 39 Week(s)-Continuous; Tumorigenic: Carcinogenic by RTECS criteria; Liver: Tumors; Kidney, Ureter, and Bladder: Kidney tumors; Inhalation-Man TCLo • 400 mppcf 1 Year(s)-Continuous; Tumorigenic: Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration: Tumors; Inhalation-Rat TCLo • 11 mg/m³ 26 Week(s)-Intermittent; Tumorigenic: Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration: Tumors</td>
<td></td>
</tr>
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</table>

#### GHS Properties

<table>
<thead>
<tr>
<th>GHS Properties</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>EU/CLP • Data lacking</td>
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<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>Skin corrosion/Irritation</td>
<td>EU/CLP • Data lacking</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>Serious eye damage/Irritation</td>
<td>EU/CLP • Data lacking</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>EU/CLP • Data lacking</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>EU/CLP • Data lacking</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>EU/CLP • Data lacking</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>EU/CLP • Carcinogenicity 1A; May cause cancer</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Carcinogenicity 1A</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>EU/CLP • Data lacking</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>Toxicity for Reproduction</td>
<td>EU/CLP • Data lacking</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Data lacking</td>
</tr>
<tr>
<td>STOT-SE</td>
<td>EU/CLP • Specific Target Organ Toxicity Repeated Exposure 1</td>
</tr>
<tr>
<td></td>
<td>OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1</td>
</tr>
<tr>
<td>STOT-RE</td>
<td>EU/CLP • Specific Target Organ Toxicity Repeated Exposure 1</td>
</tr>
</tbody>
</table>

#### Potential Health Effects

**Inhalation**

**Acute (Immediate)**
- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

**Chronic (Delayed)**
- Overexposure to breathing asbestos may cause asbestosis, pulmonary fibrosis, mesothelioma, other lung disorders or cancer. All types of asbestos are known to cause inflammatory changes in lungs and pleurae. However, there is experimental and epidemiologic evidence that there may be differences in the potential of different asbestos types to produce disease. It has been suggested that crocidolite has greatest potential to produce disease; chrysotile, the smallest; with amosite occupying an intermediate position.

**Skin**

**Acute (Immediate)**
- Exposure to dust may cause mechanical irritation.
Chronic (Delayed) • No data available

Eye
Acute (Immediate) • Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed) • No data available

Ingestion
Acute (Immediate) • Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed) • No data available

Carcinogenic Effects
• Repeated and prolonged exposure may cause cancer.

<table>
<thead>
<tr>
<th>Carcinogenic Effects</th>
<th>CAS</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos, chrysotile</td>
<td>12001-29-5</td>
<td>Specifically Regulated Carcinogen</td>
<td>Group 1-Carcinogenic</td>
<td>Known Human Carcinogen</td>
</tr>
</tbody>
</table>

Key to abbreviations
TC = Toxic Concentration
TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity
• Material data lacking.

12.2 Persistence and degradability
• Material data lacking.

12.3 Bioaccumulative potential
• Material data lacking.

12.4 Mobility in Soil
• Material data lacking.

12.5 Results of PBT and vPvB assessment
• No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects
• No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods
Product waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information
14.6 Special precautions for user
- None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Data lacking.

### Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**SARA Hazard Classifications**
- Chronic

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>Canada DSL</th>
<th>Canada NDSL</th>
<th>EU EINECS</th>
<th>EU ELNICS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos, chrysotile</td>
<td>12001-29-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Canada**

**Labor**
- Canada - WHMIS 1988 - Classifications of Substances
  - Asbestos, chrysotile
    - 12001-29-5 D2A

- Canada - WHMIS 1988 - Ingredient Disclosure List
  - Asbestos, chrysotile
    - 12001-29-5 0.1 %

**Environment**
- Canada - CEPA - Priority Substances List
  - Asbestos, chrysotile
    - 12001-29-5 Not Listed

**United States**

**Labor**
- U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals
  - Asbestos, chrysotile
    - 12001-29-5 Not Listed

- U.S. - OSHA - Specifically Regulated Chemicals
  - Asbestos, chrysotile
    - 12001-29-5 1.0 fiber/cm³ Excursion Limit (See 29 CFR 1910.1001, 30 min); 0.1 fiber/cm³ TWA

**Environment**
- U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants
  - Asbestos, chrysotile
    - 12001-29-5 Not Listed

- U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities
  - Asbestos, chrysotile
    - 12001-29-5 Not Listed

- U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities
Asbestos, Chrysotile

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Revision Date • 19/December/2016
Preparation Date • 14/January/2016
Disclaimer/Statement of Liability

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**Key to abbreviations**

NDA = No Data Available