SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Trade name: Thermo-12(R) Gold Calcium Silicate Insulation

Manufacturer or supplier's details

Company: Johns Manville
Address: P.O. Box 5108
         Denver, CO USA 80127
Telephone: 303-978-2000 8:00AM-5:00PM M-F
Emergency telephone number: 1-800-424-9300 (Chemtrec, in English)

Prepared by: productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Not a hazardous substance or mixture.

GHS Label element
Not a hazardous substance or mixture.

Other hazards
Temporary mechanical abrasion (itching) of skin, eyes and respiratory tract may occur upon exposure to fibers or dust during handling of this product.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
Pipe or block insulation with a tan color throughout to indicate the product is asbestos free.

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>synthetic calcium silicate</td>
<td>1344-95-2</td>
<td>&gt;= 90</td>
</tr>
<tr>
<td>cellulose fiber</td>
<td>9004-34-6</td>
<td>&gt;= 0 - &lt;= 4</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice: No hazards which require special first aid measures.

If inhaled: If symptoms persist, call a physician.

In case of skin contact: If symptoms persist, call a physician.

In case of eye contact: Remove contact lenses. Protect unharmed eye. Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Hazardous combustion products: No hazardous combustion products are known.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information: Standard procedure for chemical fires.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid dust formation.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage: Keep in a dry, cool place.

Materials to avoid: No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>synthetic calcium silicate</td>
<td>1344-95-2</td>
<td>TWA (Respirable)</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total dust)</td>
<td>15 mg/m³</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>OSHA</td>
</tr>
</tbody>
</table>
Thermo-12(R) Gold Calcium Silicate Insulation

<table>
<thead>
<tr>
<th></th>
<th>(respirable fraction)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>cellulose fiber</td>
<td>TWA 10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>9004-34-6</td>
<td>TWA 10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>TWA (Respirable)</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m³</td>
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</tr>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. No personal respiratory protective equipment normally required.

Hand protection

Remarks: For prolonged or repeated contact use protective gloves.

Eye protection: Safety glasses

Skin and body protection: If used and stored as directed, no special protective equipment is necessary.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: solid

Colour: tan

Odour: odourless

Odour Threshold: No data available

pH: Not applicable

Melting point/range: 1,200 °F

Initial boiling point and boiling range: Not applicable

Flash point: Not applicable

Evaporation rate: Not applicable

Flammability (solid, gas): No data available

Upper explosion limit: Not applicable
**Thermo-12(R) Gold Calcium Silicate Insulation**

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- **Lower explosion limit**: Not applicable
- **Vapour pressure**: Not applicable
- **Relative vapour density**: Not applicable
- **Relative density**: 0.24
- **Solubility(ies)**
  - **Water solubility**: insoluble
- **Solubility in other solvents**: No data available
- **Partition coefficient: n-octanol/water**: Not applicable
- **Auto-ignition temperature**: No data available
- **Thermal decomposition**: No data available
- **Viscosity**
  - **Viscosity, dynamic**: Not applicable
  - **Viscosity, kinematic**: Not applicable

**SECTION 10. STABILITY AND REACTIVITY**

- **Reactivity**: No decomposition if stored and applied as directed.
- **Chemical stability**: No decomposition if stored and applied as directed.
- **Possibility of hazardous reactions**: Stable under recommended storage conditions. No hazards to be specially mentioned.
- **Conditions to avoid**: No data available

**SECTION 11. TOXICOLOGICAL INFORMATION**

- **IARC**: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **ACGIH**: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- **OSHA**: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
- **NTP**: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
STOT - single exposure

Components:
synthetic calcium silicate:
Target Organs: Eyes, Lungs

Further information

Product:
Remarks: Temporary mechanical abrasion (itching) of skin, eyes and respiratory tract may occur upon exposure to fibers or dust during handling of this product. No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

Product:
Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information Due to the properties of the article, a hazard to the environment may not be expected.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Packaging that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.
SECTION 14. TRANSPORT INFORMATION

International transport regulations

These products are not classified as dangerous goods according to international transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

SECTION 16. OTHER INFORMATION

Further information
Revision Date : 01/15/2015

The information provided 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 a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to
the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.