1. IDENTIFICATION

Product Name: Thermafiber K-FAC-19

Product Code: OCMW00005

Recommended Use: This product is used as a backup insulation in high temperature applications such as, furnaces, reactors and other processing units

Manufacturer Address: Owens Corning Mineral Wool, LLC
One Owens Corning Parkway
Toledo, Ohio 43659

Company Phone Number: 1-800-GET-PINK or 1-800-438-7465

24 Hour Emergency Phone Number: Chemtrec 1-800-424-9300

Emergency Telephone: 1-419-248-5330 (after 5 pm ET and weekends)

E-mail address: safetydatasheet@owenscorning.com

Company Website: http://owenscorning.com/

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status: This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

WHMIS Regulatory Status: This chemical is considered hazardous by the Canadian Hazardous Products Regulation SOR/2015-17

Carcinogenicity: Category 1A

Specific target organ toxicity (repeated exposure): Category 2

Label elements

Danger

Hazard statements
May cause cancer
May cause damage to organs through prolonged or repeated exposure

ERG Code: If exposed or concerned: Get medical advice/attention

Precautionary Statements - Storage: Store locked up
Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
• Not applicable

Unknown acute toxicity
• No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Wool</td>
<td>65997-17-3</td>
<td>30-40</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Aluminum hydrous silicate: Kaolin Clay</td>
<td>1332-58-7</td>
<td>20-30</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>1-5</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>0.1-1</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>

* The remaining components of this product are non-hazardous or are in a small enough quantity as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product

* The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

Description of First Aid Measures

Eye contact
• In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice
• Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
• DO NOT rub or scratch eyes
• If eye irritation persists: Get medical advice/attention

Skin contact
• Wash off immediately with soap and plenty of cold water
• DO NOT use warm water because this will open up the pores of the skin, which will cause further penetration of the fibers
• Use a wash cloth to help remove fibers
• DO NOT rub or scratch affected area
• Remove contaminated clothing and shoes
• If skin irritation persists, call a physician
• If fibers are seen penetrating from the skin, the fibers can be removed by applying and removing adhesive tape so that the fibers adhere to the tape and are pulled out of the skin
• Never use compressed air to remove fibers from skin

Inhalation
• Remove to fresh air
• If symptoms persist, call a physician

Ingestion
• Accidental ingestion of this material is unlikely
• Rinse mouth with water and drink water to remove fibers from the throat
• If this does occur watch person for several days to make sure intestinal blockage does not occur
• If symptoms persist, call a physician

Note to physicians
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media
• Caution: Use of water spray when fighting fire may be inefficient
Specific hazards arising from the chemical • No information available

Hazardous combustion products • Carbon monoxide
• Carbon dioxide (CO2)
• Ammonia
• Other undetermined compounds could be released in small quantities

Explosion data Sensitivity to Mechanical Impact • None
Sensitivity to Static Discharge • None

Protective equipment and precautions for firefighters • As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions • Avoid contact with eyes and skin

Environmental precautions • See Section 12 for ecotoxicology additional information
• Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Methods for containment • This material will settle out of air
• Prevent from spreading by covering, diking or other means

Methods for cleaning up • Use personal protective equipment as required
• Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry
• Take up mechanically, placing in appropriate containers for disposal
• Avoid creating dust
• Clean contaminated surface thoroughly
• Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and fiber contamination
• Avoid dry sweeping
• Pick up and transfer to properly labeled containers

7. HANDLING AND STORAGE

Conditions for safe storage, including any incompatibilities

Storage Conditions • Keep product in packaging until use to minimize potential dust generation
• Product should be kept dry and undercover

Incompatible materials • None known based on information supplied

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydrous silicate: Kaolin Clay 1332-58-7</td>
<td>TWA: 2 mg/m³ particulate matter containing no asbestos and &lt;1% crystalline silica, respirable fraction</td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable</td>
<td>TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust</td>
</tr>
</tbody>
</table>
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Material</th>
<th>TWA: 10 mg/m³</th>
<th>TWA: 15 mg/m³ total dust</th>
<th>TWA: 5 mg/m³ respirable dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starch 9005-25-8</td>
<td></td>
<td>TWA: 15 mg/m³ total dust</td>
<td>TWA: 5 mg/m³ respirable dust</td>
</tr>
<tr>
<td>Quartz 14608-60-7</td>
<td>TWA: 0.025 mg/m³ respirable fraction</td>
<td>(vacated) TWA: 0.1 mg/m³ respirable dust</td>
<td></td>
</tr>
<tr>
<td>Ground Calcium Carbonate 1317-65-3</td>
<td>TWA: 15 mg/m³ total dust</td>
<td>TWA: 5 mg/m³ respirable fraction</td>
<td></td>
</tr>
<tr>
<td>Fiberglass wool 65997-17-3</td>
<td>TWA: 1 fiber/cm³ respirable fibers: length &gt;5 µm, aspect ratio &gt;=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination TWA: 5 mg/m³ inhalable fraction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide 13463-67-7</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 15 mg/m³ total dust</td>
<td>TWA: 5 mg/m³ total dust</td>
</tr>
</tbody>
</table>

**Engineering Controls**

- Provide local exhaust and/or general ventilation to maintain exposure below regulatory and recommended limits.
- Dust collection system must be used in transferring operations, cutting or other dust generating processes, such as using power tools.
- Vacuum or wet clean-up methods should be used.

**Individual protection measures, such as personal protective equipment**

- **Eye/face protection**
  - Wear safety glasses with side shields (or goggles)

- **Skin and body protection**
  - Wear protective gloves
  - Wear long-sleeved shirt and long pants

- **Respiratory protection**
  - When workers are facing airborne particulates/dust concentrations above the exposure limits, they must use an appropriate certified respirator.
  - A properly fitted NIOSH approved disposable N 95 type dust respirator or better is recommended.

- **General Hygiene Considerations**
  - Wash hands before breaks and immediately after handling products
  - Remove and wash contaminated clothing before re-use

**Other Information**

Vacant limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Physical State @20°C**

- Solid

**Appearance**

- Fibrous

**Odor**

- None

**Color**

- Various

**Melting point / freezing point**

- > 1150 °C / 2102 °F

**Boiling point / boiling range**

- No information available

**Flash point**

- No information available

**Water solubility**

- Insoluble in water
**10. STABILITY AND REACTIVITY**

**Reactivity**
- Not applicable

**Chemical stability**
- Stable under recommended storage conditions

**Possibility of Hazardous Reactions**
- None under normal processing

**Conditions to avoid**
- None known

**Incompatible materials**
- None known based on information supplied

**Hazardous Decomposition Products**
- None known based on information supplied

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**
- Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. High exposures may cause difficulty breathing, congestion, and chest tightness.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>LD50/dermal/rat - NO UNITS (Wizards mg/kg)</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz 14808-60-7</td>
<td>= 500 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Titanium Dioxide 13463-67-7</td>
<td>&gt; 10000 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Immediate Health Effects:**
- Product may cause temporary skin and mucous membrane itching

**Sensitization**
- No information available.

**Germ cell mutagenicity**
- No information available.

**Carcinogenicity**
- This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Wool 65997-17-3</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Quartz 14808-60-7</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>Titanium Dioxide 13463-67-7</td>
<td>-</td>
<td>Group 2B</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

**ACGIH (American Conference of Governmental Industrial Hygienists)**
- A2 - Suspected Human Carcinogen

**IARC (International Agency for Research on Cancer)**
- Group 1 - Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans
- Group 3 - Not classifiable as a human carcinogen

**NTP (National Toxicology Program)**
- Known - Known Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**
- X - Present
Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
Target Organ Effects
Aspiration hazard

No information available.

lungs.

Eyes, lungs, Respiratory system, Skin.

No information available.

mg/kg

12. ECOLOGICAL INFORMATION

Persistence and degradability
Bioaccumulation
Other adverse effects

• No information available
• No information available
• No information available

13. DISPOSAL CONSIDERATIONS

Disposal of wastes
Contaminated packaging

• Disposal should be in accordance with applicable regional, national and local laws and regulations
• Do not reuse container

14. TRANSPORT INFORMATION

DOT
TDG
MEX
ICAO (air)
IATA
IMDG
RID
ADR
ADN

Not regulated
Not regulated
Not regulated
Not regulated
Not regulated
Not regulated
Not regulated
Not regulated
Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Wool</td>
<td>X</td>
<td>X</td>
<td></td>
<td>926-099-9</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Aluminum hydrous silicate: Kaolin Clay</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Quartz</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Acute health hazard</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
WARNING! This product contains a chemical known in the State of California to cause cancer

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydrous silicate: Kaolin Clay</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1332-58-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Starch</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>9005-25-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartz</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>14808-60-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Calcium Carbonate</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1317-65-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>13463-67-7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Creation Date 01-Feb-2014
Revision Date 28-Jul-2016
Revision Note This Safety Data Sheet replaces the Material Safety Data Sheet numbered Thermafiber®

Disclaimer
Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use

End of Safety Data Sheet