Material Safety Data Sheet

Material Name: Fiberglas® Duct Liner Board

*** Section 1 - Chemical Product and Company Identification ***

Product Name(s): Fiberglas® Duct Liner Board

Owens Corning
One Owens Corning Parkway, World Headquarters
Attn. Product Stewardship
Toledo, OH  43659, USA

Emergency Contacts:
Emergencies ONLY (after 5pm ET and weekends):  1-419-248-5330,
CHEMTREC (24 hours everyday):  1-800-424-9300,
CANUTEC (Canada - 24 hours everyday):  1-613-996-6666.

Health and Technical Contacts:
Health Issues Information (8am-5pm ET):  1-800-GET-PINK,
Technical Product Information (8am-5pm ET):  1-800-GET-PINK.

*** Section 2 - Composition / Information on Ingredients ***

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent by Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>65997-17-3</td>
<td>Glass, oxide</td>
<td>76-94</td>
</tr>
<tr>
<td>25104-55-6</td>
<td>Urea, polymer with formaldehyde and phenol</td>
<td>3.6-14.55</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
<td>0-10</td>
</tr>
<tr>
<td>65997-17-3</td>
<td>Chopped continuous filament Fiber Glass</td>
<td>0-5</td>
</tr>
<tr>
<td>Not Available</td>
<td>Latex copolymer emulsion</td>
<td>0-1.25</td>
</tr>
</tbody>
</table>

Component Related Regulatory Information
This product may be regulated, have exposure limits or other information identified as the following: Glass wool fiber, Fibrous glass, Nuisance particulates, Carbon black.

Component Information/Information on Non-Hazardous Components
No additional information available.

*** Section 3 - Hazards Identification ***

Appearance and Odor: Pink, yellow, black or tan fibrous material with faint resin odor.

Emergency Overview
Acrid smoke may be generated in a fire. Exposure to dust may be irritating to eyes, nose, and throat.
Potential Health Effects

Inhalation:
Dusts of this product may cause irritation of the nose, throat, and respiratory tract. This product contains carbon black, which is classified as a possible carcinogen by the International Agency for Research on Cancer. See section 11 for additional information.

Skin Contact:
Dust and fibers from this product may cause itching and short-term irritation.

Eye Contact:
This product may cause slight irritation to the eyes. Dusts and fibers from this product cause mechanical irritation.

Ingestion:
Dusts and fibers from this product cause mechanical irritation. Ingestion of fiberglass may cause or complete or partial intestinal obstruction.

Medical Conditions Aggravated by Exposure:
Respiratory or skin conditions that are aggravated by mechanical irritants may be at an increased risk for worsening from exposure to this product.

*** Section 4 - First Aid Measures ***

Inhalation:
If inhaled, immediately remove the affected person to fresh air. If symptoms persist, get medical attention.

Skin Contact:
For skin contact, wash immediately with soap and water. Use a wash cloth to help remove fibers. To avoid further irritation, do not rub or scratch affected areas. Rubbing or scratching may force fibers into the skin. If irritation persists, get medical attention.

Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention.

Ingestion:
Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal obstruction does not occur.

*** Section 5 - Fire Fighting Measures ***

Flash Point: None
Upper Flammability Limit: Not applicable
Flammability Classification: Non-flammable
Flash Point Method: Not applicable
Lower Flammability Limit: Not applicable

Extinguishing Media:
Dry chemical, foam, carbon dioxide, water fog.

Unusual Fire & Explosion Hazards:
None known.

Fire-Fighting Instructions:
Use self-contained breathing apparatus (SCBA) and full bunker turnout gear in a sustained fire.
**Hazardous Combustion Products:**
Primary combustion products are carbon monoxide, carbon dioxide, ammonia, and water. Other undetermined compounds could be released in small quantities.

**Section 6 - Accidental Release Measures**

**Containment Procedures:**
This material will settle out of the air. If concentrated on land, it can then be scooped up for disposal as a non-hazardous waste. This material will sink and disperse along the bottom of waterways and ponds. It cannot easily be removed after it is waterborne; however, the material is non-hazardous in water.

**Clean-Up Procedures:**
Scoop up material and put into a suitable container for disposal as a non-hazardous waste.

**Response Procedures:**
Isolate area. Keep unnecessary personnel away.

**Special Procedures:**
None.

**Section 7 - Handling and Storage**

**Handling Procedures:**
Keep product in its packaging, as long as practicable to minimize potential dust generation. Keep work areas clean. Avoid unnecessary handling of scrap materials by placing them in waste disposal containers and equipment, kept as to close working areas as possible, to prevent release of fibers and dust.

Avoid inhaling dusts or vapors produced during thermal processing. Avoid eye and excessive skin contact. Use only with adequate ventilation. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Special care must be taken to avoid buildup of dusts.

**Storage Procedures:**
No special procedures are required for this material.

**Section 8 - Exposure Controls / Personal Protection**

**Exposure Guidelines:**

A: General Product Information
Follow all applicable exposure limits.

B: Component Exposure Limits
ACGIH and OSHA exposure limit lists have been checked for those components with CAS registry numbers.

**Glass, oxide (65997-17-3)**
ACGIH: 1 f/cc TWA for respirable fibers longer than 5 um with a diameter less than 3 um; (Listed under "Synthetic vitreous fibers") (related to Glass wool fibers)
OSHA: 1 fiber/cc (respirable) TWA (a) (See Note Below) (related to Glass wool fiber)

**Carbon black (1333-86-4)**
ACGIH: 3.5 mg/m3 TWA
OSHA: 3.5 mg/m3 TWA
Material Name: Fiberglas® Duct Liner Board

Note: (a) A voluntary PEL was established by the North American Insulation Manufacturers Association (NAIMA) and OSHA per the Health and Safety Partnership Program (HSPP) agreement for Synthetic Vitreous Fibers (SVF).

Ventilation:
General dilution ventilation and/or local exhaust ventilation should be provided as necessary to maintain exposures below regulatory limits. Dust collection systems should be used in operations involving cutting or machining and may be required in operations using power tools.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection:
Respiratory Protection: When the temperature of the surface being insulated exceeds 250°F (121°C), including initial system startup, the binder in these products may undergo various degrees of decomposition depending on the temperature of the application. The need for respiratory protection will vary according to the airborne concentration of the decomposition products released and accumulated in the area. If the insulation is installed on hot surfaces above 250°F (121°C), a full-face respirator with cartridges approved for protection against organic vapors should be used. In areas with good general and/or local exhaust ventilation where exposures are controlled below the formaldehyde, carbon monoxide, and ammonia PEL or STEL, and additive effects have been factored in, then respiratory protection is normally not needed.

Fiberglass wool: If thermal decomposition products are not anticipated, use a 3M Model 8710 (3M Model 9900 in high humidity environments) or equivalent under the following conditions: 1) in any poorly ventilated space, 2) fabrication involving power tools, 3) any dusty environment.

Formaldehyde: In some applications these products may initially release concentrations of formaldehyde equal to or greater than 0.1 ppm, but less than 0.5 ppm. Airborne concentrations should be assessed to determine the appropriate type of respiratory protection to be used. When in doubt, use supplied air respiratory protection.

Skin Protection:
Normal work clothing (long sleeved shirts, long pants and gloves) is recommended. Skin irritation is known to occur chiefly at the pressure points such as around the neck, wrists, waist and between the fingers.

Eyes/Face Protective Equipment:
Wear safety glasses, goggles or face shield.

*** Section 9 - Physical & Chemical Properties ***

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Fibrous</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg @ 20°C)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity (Water=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate (n-Butyl Acetate=1):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Odor</td>
<td>Organic</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Physical Properties: Additional Information
No additional information available.
**Section 10 - Chemical Stability & Reactivity Information**

**Stability:**
This is a stable material.

**Conditions to Avoid:**
None expected.

**Incompatible Materials:**
None expected.

**Hazardous Decomposition Products:**
Primary combustion products are carbon monoxide, carbon dioxide, ammonia, and water. Other undetermined compounds could be released in small quantities.

**Hazardous Polymerization:**
Will not occur.

**Section 11 - Toxicological Information**

**Acute and Chronic Toxicity:**

**A: General Product Information**
No information available for the product. 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. Higher exposures may cause difficulty breathing, congestion, and chest tightness.

**B: Component Analysis - LD50/LC50**

**Urea, polymer with formaldehyde and phenol (25104-55-6)**
Oral LD50 Rat : 7 gm/kg  
Oral LD50 Mouse : 7 gm/kg

**Carbon black (1333-86-4)**
Oral LD50 Rat : >15400 mg/kg  
Dermal LD50 Rabbit : >3 gm/kg

**Carcinogenicity:**

**A: General Product Information**
No information available for the product.

**Fiber Glass Wool:** In October 2001, the International Agency for Research on Cancer (IARC) classified fiber glass wool as Group 3, "not classifiable as to its carcinogenicity to humans." The 2001 decision was based on human studies and animal research that have not shown an association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease. This classification replaces the IARC finding in 1987 of a Group B designation “possibly carcinogenic to humans.”

In May 1997, the American Conference of Governmental Industrial Hygienists (ACGIH) adopted an A3 carcinogen classification for glass wool fibers. The ACGIH A3 classification considers glass wool to be carcinogenic in experimental animals at relatively high doses, by routes of administration, at sites, or by mechanisms that it does not consider relevant to worker exposure. It also reviewed the available epidemiological studies and concluded that they do not confirm an increased risk of cancer in exposed humans. Overall, the ACGIH found that the available medical/scientific evidence suggests that glass wool is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.
In 1994, the National Toxicology Program (NTP) classified glass wool (respirable size) as "reasonably anticipated to be a human carcinogen." This classification was primarily based upon the 1987 IARC classification. NTP is currently considering reclassifying this material.

**Carbon black**: Some studies have found no excess risk for lung cancer in persons chronically exposed to carbon black. However, there was excess mortality from lung cancer in one study in exposed British workers. Exposed Russian workers had excess cancers of the lung, stomach, and gastrointestinal tract. High occupational exposure to carbon black was associated with increased risk for all lung cancers, especially oat-cell carcinoma, in a case-control study on 857 incident cases in Montreal, Canada.

Carbon black was not carcinogenic in mice exposed by the oral route or in mice, rabbits, or monkeys with dermal exposure. Carbon black was not carcinogenic in monkeys exposed by either the oral or dermal routes. Carbon black can adsorb known carcinogens and facilitate their transport through intact skin. Chronic exposure to carbon black for 18 hours per day, 5 days per week for 10 months, with or without pyrolyzed pitch concentrate and irritant gases, followed by exposure to clean air for up to 20 months produced precancerous lesions in the lungs of female rats. A pulmonary mucoepidermoid carcinoma was induced in a rat by inhalation administration of a pyrolized pitch condensate mixture rich in carbon black and polynuclear aromatic hydrocarbons (PAHs) for 10 months. Lung tumors were induced in rats, but not in mice, exposed to an average airborne concentration of 11.6 mg/m (3) of carbon black for 2 years.

IARC reclassified carbon black into group 2B, and classified it as it a "possible human carcinogen." Carbon Formerly, carbon black was in IARC group 3, "not classifiable as to carcinogenicity in humans." The reclassification was based primarily upon the discovery of lung tumors in rats exposed chronically to high concentrations of carbon black by inhalation.

### B: Component Carcinogenicity

ACGIH, IARC, OSHA, and NTP carcinogen lists have been checked for those components with CAS registry numbers.

**Glass, oxide (65997-17-3)**
- **ACGIH**: A3 - animal carcinogen (related to Glass wool fibers)
- **NTP**: Reasonably anticipated to be a human carcinogen (related to glasswool) (possible select carcinogen)
- **IARC**: Monograph 81, 2001 (related to Glasswool) (Group 3 (not classifiable as to its carcinogenicity to humans))

**Carbon black (1333-86-4)**
- **ACGIH**: A4 - Not Classifiable as a Human Carcinogen
- **IARC**: Monograph 65, 1996 (Group 2B (possibly carcinogenic to humans))

### *** Section 12 - Ecological Information ***

**Ecotoxicity:**
No data available for this product. This material is not expected to cause harm to animals, plants or fish.

**Environmental Fate:**
No data available for this product.
**Section 13 - Disposal Considerations**

US EPA Waste Number & Descriptions:
- **A: General Product Information**
  - This product, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

- **B: Component Waste Numbers**
  - No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions:
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

**Section 14 - Transportation Information**

US DOT Information:
- **Shipping Name:** Not regulated for transport.
- **Hazard Class:** None
- **UN/NA #:** None
- **Packing Group:** None
- **Required Label(s):** None
- **Additional Info:** None

TDG Information:
- **Shipping Name:** Not regulated for transport.
- **Hazard Class:** None
- **UN/NA #:** None
- **Packing Group:** None
- **Required Label(s):** None
- **Additional Info:** None

Additional Transportation Regulations:
- No additional information available.

**Section 15 - Regulatory Information**

US Federal Regulations:
- **A: General Product Information**
  - No additional information available.

- **B: Component Analysis**
  - This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).
  - None

- **SARA 311/312**
  - **Acute Health Hazard:** Yes
  - **Chronic Health Hazard:** Yes
  - **Fire Hazard:** No
  - **Sudden Release of Pressure Hazard:** No
  - **Reactive Hazard:** No
C: Clean Air Act
The following components appear on the Clean Air Act-1990 Hazardous Air Pollutants List:
None

State Regulations:
A: General Product Information
No additional information available.

B: Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass, oxide (Fibrous Glass) (¹ related to Mineral wool fiber)</td>
<td>65997-17-3</td>
<td>Yes¹</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes¹</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer.

Other Regulations:
A: General Product Information
No additional information available.

B: Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>DSL</th>
<th>EINECS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass, oxide</td>
<td>65997-17-3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Urea, polymer with formaldehyde and phenol</td>
<td>25104-55-6</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

C: Component Analysis - WHMIS IDL
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass, oxide</td>
<td>65997-17-3</td>
<td>1% item 768 (884) (related to Fibrous glass)</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>1% item 309 (1271)</td>
</tr>
</tbody>
</table>

WHMIS Status: Controlled
WHMIS Classification: D2A- Carcinogenicity

*** Section 16 - Other Information ***

<table>
<thead>
<tr>
<th>HMIS and NFPA Hazard Ratings:</th>
<th>Category</th>
<th>HMIS</th>
<th>NFPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

NFPA Unusual Hazards None
HMIS Personal Protection To be supplied by user depending upon use.
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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.

Key/Legend:
EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NJTSR = New Jersey Trade Secret Registry.

Revision Summary:
This is a new MSDS. Read this information carefully.

Get OC MSDS electronically via Internet: http://www.owenscorning.com or by calling 1-800-GET-PINK.

This is the end of MSDS # 100707-01