

# Material Safety Data Sheet

Material Name: Fiber Glass Insulation  
MSDS No.: MSD-01-2021

## Section 1 – Chemical Product and Company Identification

**Product Name (s):** Acoustical Ceiling Panels (**ACP**), Blanket Insulation (**BKT**), Board Insulation (**BD**), Cavity Wall Insulation (**CWI**), Duct Liner (**DL**), Duct Liner Board (**DLB**), Faced Duct Wrap (**FDW**), HD Series Blanket Insulation (**HDB**), Heavy Density Pipe Insulation (**PI**), Mechanical Board Insulation (**MBD**), Pipe Wrap Insulation (**PWI**), Pre-engineered Metal Building Insulation (**PEBI**), Quiet Liner (**QL**), Quiet Liner Board (**QLB**), Roof Deck Board Insulation (**R/RD**), Thermal Insulating Wool (**TIW**).

**Manufacturer:** **Arabian Fiberglass Insulation Company Ltd.**  
J.V. of Gulf Insulation Group (A Zamil Industrial Subsidiary) & Owens Corning Co.  
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## Section 2 – Composition / Information on Ingredients

CAS #	Component	Percent by Weight
65997-17-3	Fiber Glass Wool ( <i>Fibrous Glass</i> )	85-96
25104-55-6	Urea, Polymer with Formaldehyde and Phenol	4-15
50-00-0	Formaldehyde	< 0.1

**Component Related Regulatory Information**  
This product may be regulated, have exposure limits or other information identified as the following:  
Fiber Glass Wool, Fibrous Glass, Nuisance particulates.

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

## Section 3 – Hazardous Identification

**Appearance and Odor:**  
Pale Yellow, or tan fibrous material with faint resin odor. Some products have a vinyl, brown Kraft paper, FRK, WMSK, ASJ, DSF, BGT, WGF, Aluglass.

**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 and fibers from this product may cause mechanical irritation of the nose, throat and respiratory tract. Use of these products has not been shown to cause cancer in humans. Fiber glass wool caused cancer in animals through un-natural routes of exposure (surgical implantation), but has not produced cancer by inhalation.

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**Skin Contact:**

Dusts and fibers from these products may cause temporary mechanical irritation to the skin.

**Eye Contact:**

Dusts and fibers from these products may cause temporary mechanical irritation to the eyes.

**Ingestion:**

Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances. Medical Conditions Aggravated by Exposure: Chronic respiratory or skin conditions may temporarily worsen from exposure to these products.

## Section 4 – First Aid Measures

**Inhalation:**

If inhaled, remove the affected person to fresh air. If irritation persists get medical attention.

**Skin Contact:**

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

Never use compressed air to remove fibers from the skin. 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.

**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. Do not induce vomiting unless directed to do so by medical personnel.

## 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:**

These products may release acrid smoke in a sustained fire.

**Fire Fighting Instructions:**

Use self-contained breathing apparatus (SCBA) and full banker turnout gear in a sustained fire.

**Hazardous Combustion Products:**

Primary combustion products are carbon monoxide, carbon dioxide, ammonia and water. Other unidentified can 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 can not easily be removed after it is water borne; however, the material is non-hazardous in water.

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### Clean-Up Procedures:

Scoop up material and put into a suitable container for disposal as a non-hazardous waste.

### Response Procedures:

Isolate the area. Keep un-necessary personnel away.

### Special Procedures:

None.

## Section 7 – Handling and Storage

### Handling Procedures:

No special procedures are required for this material. Based on best practices of handling materials. Keep product in its packaging, as long as practicable to minimize potential dust generation. Keep work areas clean. avoid un-necessary 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 dusts.

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

### Storage Procedures:

Keep away from direct sunlight, rain and water store in a plain lease protected warehouse.

## Section 8 – Exposure Controls / Personal Protection

### Exposure Guidelines:

#### A: General Product Information

Follow all applicable exposure limits.

#### B: Components Exposure Limits.

ACGIH and OSHA exposure limits have been checked for those components with CAS registry numbers.

##### Fiber Glass Wool (Fibrous Glass) (65997-17-3)

ACGIH: 1 fiber/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) 10 mg/m<sup>3</sup> TWA (inhalable particulate); 3mg/m<sup>3</sup> TWA (respirable particulate) (These values are for particulate matter containing no asbestos and <1% crystalline silica) (related to Particulate Not Otherwise Classified (PNOC)).

OSHA: 1fiber/cc (respirable) TWA (a) (See Note Below) (related to Glass Wool Fiber)

##### Formaldehyde (50-00-0)

ACGIH: C 0.3 ppm

OSHA: 0.75 ppm TWA PEL; 2 ppm STEL; 0.5 ppm TWA action level; highly irritating to the upper respiratory tract and eyes (29 CFR 1910.1048)

**Notes:** (a) Voluntary PEL established by NAIMA and OSHA per the Health and Safety Partnership Program (HSPP) agreement for Synthetic Vitreous Fibers (SVF). Prior to the HSPP agreement, the OSHA 8 hr-TWA PELs for Particulate Not Otherwise Regulated (PNOR) of 15 mg/m<sup>3</sup> (total particulate) and 5 mg/m<sup>3</sup> (respirable particulate) applied to airborne glass wool fibers and dusts. These PELs were based on gravimetric measurements of airborne particulates including glass dusts and fibers.  
NAIMA = North American Insulation Manufacturers Association.

### C: Ventilation.

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

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## PERSONAL PROTECTIVE EQUIPMENT

### Respiratory Protection:

Respiratory Protection: When the temperature of the surface being insulated exceeds 250 °F (121 °C), including initial system start up, 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 the 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 of the product is not anticipated, use a 3M Model 8210 (formerly 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 this products may release concentration 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 and long pants) is recommended. Use impervious gloves. Skin irritation is known to occur chiefly at the pressure points such as around the neck, wrist, waist and between the fingers.

### Eyes/Face Protective Equipment:

Wear safety glasses, goggles or goggles over the gasses.

## Section 9 – Physical & Chemical Properties

<b>Appearance:</b>	Fibrous	<b>Odor:</b>	Organic
<b>Physical State:</b>	Solid	<b>PH:</b>	Not applicable
<b>Vapor Pressure (mm Hg @ 20 °C):</b>	Not applicable	<b>Vapor Density (Air=1):</b>	Not applicable
<b>Boiling Point:</b>	Not applicable	<b>Solubility (H2O):</b>	Insoluble
<b>Specific Gravity (Water=1):</b>	Not applicable	<b>Freezing Point:</b>	Not applicable
<b>Evaporation Rate (n-Butyl Acetate=1):</b>	Not applicable	<b>Viscosity:</b>	Not applicable

### 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 can be released in a small quantities.

### Hazardous Polymerization:

Will not occur.

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## 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 to throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposure may cause difficulty in 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

Formaldehyde (50-00-0)

Inhalation LC50 Rat : 203 mg/m<sup>3</sup>

Inhalation LC50 Mouse : 454 mg/m<sup>3</sup>/4H

Oral LD50 Rat : 100 mg/kg

Oral LD50 Mouse : 42 mg/kg

Dermal LD50 Rabbit : 270 uL/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.

**Formaldehyde:** In March 1987 the International Agency for Research on Cancer (IARC) upgraded their overall evaluation of formaldehyde gas, based on evidence of carcinogenicity in humans, from a possible human carcinogen (Group 2B based on inadequate evidence on humans) to a probable human carcinogen (Group 2A based on limited evidence on humans). A number of new epidemiological studies on persons in a variety of occupations with potential exposure to formaldehyde was used in the evaluation. Cancers that occurred in excess in more than one study area: Hodgkin’s disease, leukemia, and cancer of the buccal cavity and pharynx (particularly nasopharynx), lung, nose, prostate, bladder, brain, colon, skin and kidney.

Exposures to formaldehyde at concentrations in excess of 1 ppm may cause significant irritation of the eye and upper respiratory tract. The irritation threshold appears to be about 0.3 ppm. Pulmonary sensitization, although rare, does occur in humans. Formaldehyde solutions can cause severe eye and moderate skin irritation. Repeated exposure to solution of 2% or more formaldehyde has caused allergic skin reactions. Formaldehyde was found to be weakly active

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in a number of in vitro genotoxicity tests, but inactive in vivo. Formaldehyde did not cause birth defects in offspring of female mice who were exposed to concentrations up to 10 ppm. Lifetime inhalation of formaldehyde at concentrations above 5 ppm for 6 hours per day, cause nasal tumor in laboratory animals. Many epidemiological studies have failed to link cancer in humans with occupational exposure to formaldehyde.

The American Conference of Governmental Industrial hygienist (ACGIH) A2 designation, suspected human carcinogen, is based on cancer in experimental animals and conflicting or insufficient epidemiological studies of workers. The recommended ceiling TLV of 0.3 ppm for workplace air formaldehyde is based on evidence of irritation of occupational exposure to formaldehyde as well as human formaldehyde exposures in other settings.

### B: Component Carcinogenicity

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

#### Fiber Glass Wool (Fibrous Glass) (65997-17-3)

ACGIH: A3 – animal carcinogen (related to glass wool fibers)

NTP: Suspect carcinogen (related to Glass wool) (Possible Select Carcinogen)

IARC: Monograph 43, 1998 (related to glass wool) (Group 2B (possibly carcinogenic to humans))

#### Formaldehyde (50-00-0)

ACGIH: A2 – suspected human carcinogen

OSHA: 0.75 ppm TWA PEL; 2 ppm STEL; 0.5 ppm TWA action level; highly irritating to the upper respiratory tract and eyes

NTP: Suspect Carcinogen (Possible Select Carcinogen)

IARC: Monograph 62, 1995 (Group 2A (probably carcinogenic to humans))

## Section 12 – Ecological Information

### Ecotoxicity:

#### A: General Product Information

No data available in this product. This material is not expected to cause harm to animals, plants or fish.

#### B: Component Analysis – Ecotoxicity – Aquatic Toxicity

##### Formaldehyde (50-00-0)

LC50 (96 hr) fathead minnow: 24.1 mg/L. Cond: Flow-through, 21.7 degrees C, pH 6.8, 50.8 mg/L CaCO<sub>3</sub>; LC50

(96 hr) bluegill: 0.10 mg/L. Cond: Flow-through.; EC50 (96 hr) water flea: 20 mg/L.; EC50 (30 min) Photo bacterium

Phosphoreum: 3.00-10.2 mg/L Microtox test.

#### C: Environmental Fate / Other Adverse Effects

Ozone depletion potential 0

Global Warming Potential < 5

## Section 13 – Disposal Considerations

### US EPA Waste Number & Descriptions:

#### A: General Product Information

Material, if discarded, is not expected to be characteristic hazardous waste under RCRA.

#### B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

#### C: Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environment Regulations.

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## 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

### 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 Information

No additional information available. Formaldehyde content is below the SARA 313 0.1% “de minimis concentration”

#### 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)

#### Fiber Glass Wool (Fibrous Glass) (65997-17-3)

**CERCLA:** Includes mineral fiber emissions from facilities manufacturing or processing glass rock or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less; Statutory RQ=1pound (.454 kg); no final RQ is being assigned to the generic or broad class (related to fine mineral fibers)

#### Formaldehyde (50-00-0)

**SARA 302:** TPQ = 500 pounds; RQ = 100 pounds (does not meet toxicity criteria but because of high production volume and recognized toxicity is considered a chemical of concern)  
**SARA 313:** Form R reporting required for 0.1% de minimis concentration  
**CERCLA:** Final RQ = 100 pounds (45.4 kg)

#### 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 Lists:

Component	CAS	CAA
Fiber Glass Wool (Fibrous Glass) (related to fine mineral fibers)	65997-17-3	Yes
Formaldehyde	50-00-0	Yes

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**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:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Fiber Glass Wool (Fibrous Glass related to Mineral Wool Fiber)	65997-17-3	Yes <sup>1</sup>	No	Yes <sup>1</sup>	Yes <sup>1</sup>	No	Yes <sup>1</sup>
Formaldehyde	50-00-0	Yes	Yes	Yes	Yes	Yes	Yes

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 - WHMIS IDL**

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS	
Fiber Glass Wool (Fibrous Glass) (related to fine mineral fibers)	65997-17-3	1% item 768 (844) related to fibrous glass)

**Section 16 – Other Information**

HMIS and NFPA Hazard Ratings:	Category	HMIS	NFPA
	Acute Health	1*	2
	Flammability	0	2 (facing, packaging)
	Reactivity	0	0

**NFPA Unusual Hazards:** None

**HMIS Personal Protection:** To be supplied by user depending upon use.

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; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act; DSL = Canadian Domestic Substance List; EINECS = European Inventory of New and Existing Chemical Substances; WHMIS = Workplace Hazardous Materials Information System; CAA = Clean Air Act

**Summary:**

This is the initial release of MSDS with document control MSD-01-2021 in a current formatting and updated exposure limits and toxicological information. Read this information carefully.

**This is the end of MSD-01-2021**