

**M.C. GILL CORPORATION**

**MATERIAL SAFETY DATA SHEET**

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**1. PRODUCT AND COMPANY IDENTIFICATION**

M.C.GILL CORPORATION      4056 EASY STREET      EL MONTE, CA 91731-1087  
Contact Phone                      (626) 443-6094  
Emergency Phone                      (626) 443-6094

**PRODUCT NAME              SANDWICH PANELS COMPOSED OF CARBON FIBER  
/FIBERGLASS FABRIC-REINFORCED PHENOLIC FACING SKINS  
BONDED TO A NOMEX OR KEVLAR ARAMID HONEYCOMB CORE**

**PRODUCT CODE              GILLFAB 4109, 4205, 4505, 4509, 4605, 4609, 5509, 5509B, 5609**

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**2. COMPOSITION - INFORMATION ON INGREDIENTS**

Chemical Ingredients (% by wt.)

<u>COMPONENT</u>	<u>CAS#</u>	<u>%</u>
Co-cured phenolic resin/synthetic elastomer	proprietary	27 - 56
Cured Epoxy Adhesive	proprietary	0 – 20
Thermoplastic Polyester Resin	proprietary	0.5 – 2
Nomex Paper	25765-47-3	5 - 23
Kevlar Paper	26125-61-1	0 – 20
Carbon Fiber	7440-44-0	9 - 53
Fiberglass	65997-17-3	1 - 38
Fire Retardant	proprietary	0.7 - 5

**OSHA REGULATORY STATUS**

As shipped this material is an inert composite sandwich panel composed of carbon fiber/fiberglass fabric-reinforced phenolic facing skins bonded to a Nomex aramid honeycomb core in which thermosetting polymer ingredients have been cured under the influence of heat and pressure. While this material is not classified as hazardous under OSHA regulations, this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of the product.

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**3.HAZARDS IDENTIFICATION**

Sandwich panel black in color, with slight characteristic odor. Decomposition and combustion products may be toxic. Can decompose in a fire emitting toxic fumes and gases of carbon dioxide, carbon monoxide, methane, formaldehyde, phenol, hydrogen cyanide, hydrogen bromide, oxides of nitrogen, small amounts of aromatic and aliphatic hydrocarbons; other toxic and irritating gases can be produced depending on condition of combustion.

## POTENTIAL HEALTH EFFECTS

**EYE:** Dusts may cause irritation or scratch the surface of the eye.

**SKIN:** Skin contact with dust and fiber of this product may produce itching and transient mechanical irritation.

**INGESTION:** Ingestion is not expected to be a route of exposure. If ingestion occurs, treat symptomatically.

**INHALATION:** Inhalation of dust may result in itching and upper respiratory tract irritation. Repeated exposure to dust may cause chronic lung disorders.

## CHRONIC EFFECTS/CARCINOGENICITY

This product contains an aramid fiber reinforced honeycomb, which is coated with cured phenolic resin. While OSHA does not regulate an aramid (aromatic polyamide) paper as a carcinogen, aramid fiber has been studied by the scientific community for many years. It presents a minimal risk to human health and the environment. When mechanically working with these products, some dust may be generated. The percent concentration ratio of Kevlar or Nomex paper is 5 - 23%. Generated dust can cause eye irritation, coughing and sneezing. Repeated exposure to dust may cause chronic lung disorders. None of the components present in aramid fiber at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

This product contains synthetic fibers (fiberglass). While OSHA does not regulate fibrous glass as a carcinogen, fiberglass has been studied by the scientific community for many years as a potential carcinogen. Some mineral fibers, depending on base material and size of fiber are classified as potential carcinogens. This product contains **Continuous filament glass fibers** which are listed by IARC as (Group 3 - "Not classifiable as to carcinogenicity to humans") and ACGIH as A-4 ("Not classifiable as a human carcinogen; Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals").

This product contains synthetic **Polyacrylonitrile (PAN) based carbon fibers** which are not listed as a carcinogen by (NTP), the National Toxicology Program. OSHA does not regulate carbon fiber as a carcinogen. Carbon fibers have not been evaluated by IARC. Reported human effects indicate that the main health hazard is mechanical abrasion/irritation.

This product contains a brominated flame retardant. The primary route of exposure to humans is through inhalation. Inhalation of air concentration levels above the PNOR may cause irritation and adverse lung effects. Animal toxicity studies indicate that when the brominated fire retardant was administered orally, animal exposures resulted in liver, thyroid, and kidney effects and a potential for developmental effects. This substance is not listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Local exhaust ventilation should be used to maintain employee exposure as far below OSHA permissible exposure limits as is practical.

There are no hazardous components in this material as received, however, cutting, milling, drilling, routing or otherwise fabricating this material may produce the following: particles - not otherwise regulated, total dust. Release of this material during processing as respirable and non-respirable dust should be controlled by adequate local exhaust ventilation, good work practices, and use of personal protective equipment as needed.

Note: The components listed above are those which have not been modified by the thermo set curing process. However, the cured resins effectively encapsulate these materials. On grinding or cutting of the product, any dust generated would contain particles of the materials in the weight percentages indicated above in Section 2, Composition.

#### **MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE**

Persons with a history of chronic lung disease may be at increased risk from exposure to excessive levels of nuisance dusts. Persons with medical conditions generally aggravated by mechanical irritants in the air or on the skin may be at increased risk for a worsening of the underlying condition if exposed.

#### **POTENTIAL ENVIRONMENTAL EFFECTS**

This product as shipped is inert and should pose no significant hazard to the environment.

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#### **4.FIRST AID MEASURES**

**EYES:** Flush with water for 15 minutes. Seek medical attention if irritation persists.

**SKIN:** Wash exposed area with soap and water. Do not rub or scratch irritated area. If fiberglass becomes imbedded, seek medical attention

**INGESTION:** Avoid ingestion. Treat symptomatically.

**INHALATION:** Move individual to fresh air. Seek medical attention if irritation persists.

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#### **5.FIRE FIGHTING MEASURES**

##### **FLAMMABLE PROPERTIES**

**FLASH POINT:** Not known

##### **FLAMMABLE LIMITS**

**LFL:** Not applicable

**UFL:** Not applicable

**EXTINGUISHING MEDIA:** Water, foam, carbon dioxide, dry chemical.

**FIRE AND EXPLOSION HAZARDS:** Can decompose in a fire emitting toxic fumes and gases of carbon dioxide, carbon monoxide, methane, formaldehyde, phenol, hydrogen cyanide, hydrogen bromide, oxides of nitrogen, small amounts of aromatic and aliphatic hydrocarbons; other toxic and irritating gases can be produced depending on condition of combustion.

**FIRE FIGHTING EQUIPMENT:** Wear full bunker gear including a positive pressure self-contained breathing apparatus.

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#### **6.ACCIDENTAL RELEASE MEASURES**

HEPA vacuum or wet wipe dusts and place in a disposal container. Avoid excess dust generation.

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## 7.HANDLING AND STORAGE

Avoid contact with eyes. Avoid inhalation of product dust. Minimize dust generation and accumulation. Store indoors in dry area to protect material.

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## 8.EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Provide local exhaust ventilation to maintain airborne levels below the exposure limits. Minimize dust generation and accumulation.

**RESPIRATORY PROTECTION:** Where dust is generated use a NIOSH approved half or full face air purifying respirator with dust/mist filter cartridges. Use in accordance with OSHA regulations under 29 CFR 1910.134

**SKIN PROTECTION:** Wear gloves impermeable to glass and carbon fibers. Wear loose fitting, long sleeved clothing and long pants.

**EYE PROTECTION:** If dust is generated, wear chemical goggles or full face respirator.

### GENERAL HYGIENE CONSIDERATIONS:

The health hazards associated with this material when used as recommended are mechanical skin, eye and respiratory irritation associated with the generation of fiberglass composite dusts during machining or cutting. The following general hygiene considerations are recognized as common, good industrial hygiene practices:

- Wash hands after use and before eating.
- Shower at the end of the work day.
- Wash work clothes separately and wipe out washer at the end of the cycle.
- Avoid breathing dust.
- Wear safety goggles.

### EXPOSURE GUIDELINES

There are no hazardous components in this material as received, however, cutting, milling, drilling, routing, or otherwise fabricating this material may produce the following:

COMPONENT	OSHA PEL TWA	ACGIH TLV
Nomex Honeycomb Core	Total dust 15 mg/m <sup>3</sup>	Total dust 10 mg/m <sup>3</sup>
Fiberglass	Total dust 15 mg/m <sup>3</sup> Resp dust 5 mg/m <sup>3</sup>	Total dust 5 mg/m <sup>3</sup> Resp dust 1 fiber/cc
Carbon Fiber	Total dust 15 mg/m <sup>3</sup> Resp dust 5 mg/m <sup>3</sup>	Total dust 10mg/m <sup>3</sup>
Brominated Flame Retardant	Resp dust 5 mg/m <sup>3</sup>	Resp dust 3 mg/m <sup>3</sup>

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Sandwich panel, brown in color

**ODOR:** Slight characteristic odor

**BOILING POINT:** Not Applicable

**VAPOR PRESSURE:** Not Applicable

**SOLUBILITY IN WATER:** Not Applicable

**SPECIFIC GRAVITY:** Density varies with panel type from 0.2 – 0.4 g/cc

**pH:** Not applicable

**UEL:** Not applicable

**LEL:** Not applicable

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## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable

**MATERIALS TO AVOID:** Strong oxidizing agents, strong acids and bases, especially oxalic and hydrofluoric acid and acyl halides.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposition and combustion products may be toxic. Can decompose in a fire emitting toxic fumes and gases of carbon dioxide, carbon monoxide, methane, formaldehyde, phenol, hydrogen cyanide, hydrogen bromide, oxides of nitrogen, small amounts of aromatic and aliphatic hydrocarbons; other toxic and irritating gases can be produced depending on condition of combustion.

**HAZARDOUS POLYMERIZATION:** Will not occur

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## 11. TOXICOLOGICAL INFORMATION

For detailed toxicological information on the components of this material, contact the address listed in Section 1 of this MSDS.

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## 12. ECOLOGICAL INFORMATION

None found.

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## 13. DISPOSAL CONSIDERATIONS

If material as supplied becomes a waste, incinerate or landfill in accordance with local, state, and federal laws and regulations. Incinerate only if incinerator is operated at high temperature and is capable of scrubbing out acidic combustion products. Contact your local or state environmental agency for specific rules.

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**14. TRANSPORT INFORMATION**

**DOT:** Class 70 – Panels Faced with Plastic

**IMO:** Not Regulated

**IATA:** Not Regulated

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**15. REGULATORY INFORMATION**

**INVENTORY STATUS: Aramid Fiber, Fiber Glass, Carbon Fiber, Proprietary Brominated Fire Retardant**

<u>Inventory</u>	<u>Status</u>
United States (TSCA)	Listed
European Union (EINECS)	Listed
Canada (DSL)	Listed

**CERCLA/SUPERFUND, 40 CFR 117.302:** This material contains Reportable Quantity (RQ) Substances: none.

**SARA HAZARD CATEGORY:** This material has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered to meet the following categories: NONE

**SARA 313 INFORMATION:** This material contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. **NONE**

These products do not contain any components exceeding the de minimis amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-know act of 1986 and of **40 CFR 372**.

**CALIFORNIA PROPOSITION 65:** The following statement is made in compliance with the California Safe Drinking and Toxic Enforcement Act of 1986:

Substances known to the State of California to cause cancer, birth defects or other reproductive harm: None

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**16. OTHER INFORMATION**

**MSDS STATUS:** Revised all sections re: ANSI Z400.1-1998 format

**MSDS PREPARED By:** **M.C. Gill Corporation**

1/29/09

**END OF MSDS**