



# Sandwich Panels composed of Fiberglass Reinforced Epoxy Facing Bonded to A Nomex® Aramid Honeycomb Core

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Fiberglass	(CAS No) 65997-17-3	27 - 51	Carc. 1B, H350
Cured Phenolic Resin(s)	(CAS No) Proprietary	6 - 37	Not classified
Nomex Paper	(CAS No) 25765-47-3	8 - 30	Not classified
Co-Cured Epoxy Resin/Synthetic elastomer	(CAS No) Proprietary	8 - 20	Eye Dam. 1, H318 STOT SE 3, H335
Cured Epoxy Adhesive	(CAS No) Proprietary	6 - 16	Comb. Dust, H232
Flame retardant	(CAS No) Proprietary	3 - 8.5	Carc. 1A, H350
Aluminum (4105B and 4405B only)	(CAS No) 7429-90-5	2 - 3	Not classified

Full text of H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- First-aid measures after skin contact : Remove contaminated clothing. Rinse immediately with large amounts of water. If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention. Obtain medical attention if irritation persists. DO NOT rub or scratch irritated area. If fiberglass becomes imbedded, seek medical attention.
- First-aid measures after eye contact : Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get Immediate Medical Attention.
- First-aid measures after ingestion : Not expected to be an important route of entry into the body. If large amounts of particulate matter are ingested, it may cause gastrointestinal distress. Seek medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : As packaged, this material does not present significant health hazards. The hazards below apply to the product if aerosols or dusts are generated from cutting, grinding, or smelting. Oxides from metallic fires are a severe health hazard. Inhalation or contact with substance or decomposition product may cause severe injury or death.
- Symptoms/injuries after inhalation : Inhalation of aluminum powder may cause lung effects. Inhalation of metallic dust may be hazardous. Dust and fumes produced during processing should be treated as a dust hazard. This product contains aluminum, which can cause pulmonary fibrosis and lung damage if inhaled as a fine powder, and is complicated by silica and iron oxide dust. Aluminum may also be implicated in Alzheimer's disease. Product will act as a nuisance dust. Inhalation of high concentrations of dust may cause coughing and mild, transitory respiratory irritation.
- Symptoms/injuries after skin contact : Dusts and particulate matter may cause irritation of the skin.
- Symptoms/injuries after eye contact : Dusts and particulate matter may cause irritation of the eyes.
- Symptoms/injuries after ingestion : Not expected to be an important route of entry into the body. Ingestion of large quantities of the product may cause gastric discomfort or distress.
- Chronic symptoms : Persons with a history of chronic lung diseases may be at increased risk from exposure to excessive levels of nuisance dust. 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.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Any. Use media appropriate for surrounding fire.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Product will not burn.

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- Explosion hazard : Can decompose in a fire emitting toxic fumes and gases of carbon dioxide, carbon monoxide, hydrogen cyanide, antimony oxides, hydrogen bromide, oxides of nitrogen; other toxic and irritating gases can be produced depending on condition of combustion.
- Reactivity : Not reactive under normal use and conditions.

### 5.3. Advice for firefighters

- Firefighting instructions : Evacuate area.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Firefighters should wear a NIOSH approved full-face piece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear.
- Other information : If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : May react violently or explosively on contact with water. Dousing metallic fires with water will generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment (i.e., building, cargo hold, etc.). Containers may explode when heated. May re-ignite after fire is extinguished.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Any wastes generated during cleanup operations should be evaluated with respect to hazardous and solid waste regulations and disposed of in a properly permitted facility in accordance with all local, state, and federal regulations.

### 6.3. Methods and material for containment and cleaning up

- For containment : Move containers from fire area if you can do it without risk. DO NOT USE WATER, FOAM OR CO2. Confining and smothering metal fires is preferable rather than applying water. If impossible to extinguish, protect surroundings and allow fire to burn it out. Do not walk through any dust resulting from damage to product. Prevent entry into waterways, sewers, basements or confined areas. Stop leak if you can do it without risk.
- Methods for cleaning up : HEPA Vacuum or wet methods and place in a disposal container.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Use methods to minimize dust. Do not breathe dust. DO NOT use compressed air or dry sweeping to remove dust from work area. Use a vacuum with adequate filtration system to remove dusts. If an appropriate vacuum is unavailable, only wet-clean-up methods should be used (i.e. misting). Moisture should be added as necessary to reduce exposure to airborne respirable dust.
- Hygiene measures : Practice good housekeeping. Wash thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in tightly closed containers out of contact with the elements.
- Incompatible products : Strong acids. Reducing agents.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Sandwich Panels composed of Fiberglass Reinforced Epoxy Facing Bonded to A Nomex Aramid Honeycomb Core	
ACGIH	Not applicable
OSHA	Not applicable

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Fiberglass (65997-17-3)		
ACGIH	Not applicable	
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	3 fibers/cm <sup>3</sup> (fibers with diameter ≤ 3.5 µm & length ≥ 10 µm); 5 mg/m <sup>3</sup> TWA (total fibrous glass)

Cured Epoxy Adhesive (Proprietary) Particulates Not Otherwise Regulated		
ACGIH	Not applicable	
OSHA	Not applicable	

Flame retardant(Proprietary)		
ACGIH	ACGIH TLV	3 mg/m <sup>3</sup> resp dust
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> resp dust

Nomex Paper (25765-47-3)		
ACGIH	Not applicable	
OSHA	Not applicable	

Cured Phenolic Resin(s) (Proprietary) Particulates Not Otherwise Regulated		
ACGIH	Not applicable	
OSHA	Not applicable	

Co-Cured Epoxy Resin/Synthetic elastomer		
ACGIH	Not applicable	
OSHA	Not applicable	

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (respirable fraction)
ACGIH	Remark (ACGIH)	Pneumoconiosis; LRT irr
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (respirable particulate)
OSHA	Remark (US OSHA)	15 mg/m <sup>3</sup> (total dust)

Particulates Not Otherwise Regulated (Total Dust)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> Respirable; 10 mg/m <sup>3</sup> Total dust
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> Respirable; 15 mg/m <sup>3</sup> Total dust

### 8.2. Exposure controls

Appropriate engineering controls	: General ventilation. Local exhaust and enclosed processes may be necessary for processes which generate large quantities of airborne dust.
Personal protective equipment	: An Appropriate apron or other body covering, see above, is recommended where there is a possibility of regular work clothing becoming contaminated with the product. All soiled or dirty clothing and personal protective equipment should be thoroughly cleaned before reuse.
Eye protection	: Where eye contact is possible with particulate matter, safety glasses with side shields are recommended.
Skin and body protection	: Wear gloves impermeable to glass fibers. Wear loose fitting, long sleeved clothing and long pants.
Respiratory protection	: If dusts or particulates are generated during handling or processing and exposures may exceed the limits cited above, use, as a minimum, a NIOSH approved ½ face piece respirator with cartridges approved for particulate matter with an exposure limit of not less than 0.05 mg/M3. Respiratory protection is not normally required. If appreciable dusts and/or particulate matter are generated during handling or processing, the operation should be evaluated by a professional industrial hygienist to determine the need for respiratory protection. If respiratory protection is deemed necessary, use, as a minimum, a respirator with NIOSH approvals for particulate matter. All provisions of OSHA's Respiratory Protection Standard (29 CFR 1910.134) should be followed.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Sandwich panel.
Color	: Light gray
Odor	: Slight
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.2-0.5 g/cc
Solubility	: Unknown.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Not reactive under normal use and conditions.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Aluminum dust may generate hydrogen and heat when exposed to water. Water/aluminum powder mixture may be especially hazardous when confined and may react violently with strong oxides and many halogenated hydrocarbons. Decomposition and combustion products may be toxic. Can decompose in a fire emitting toxic fumes and gases of carbon dioxide, carbon monoxide, hydrogen cyanide, antimony oxides, hydrogen bromide; oxides of nitrogen and other toxic and irritating gases can be produced depending on condition of combustion

#### 10.5. Incompatible materials

Strong oxidizing agents, strong acids and bases, especially oxalic and hydrofluoric acid and acyl halides.

#### 10.6. 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, hydrogen cyanide, antimony oxides, hydrogen bromide; oxides of nitrogen and other toxic and irritating gases can be produced depending on condition of combustion.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

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Flame retardant	
LD50 oral rat	> 2000 mg/kg

Cured Phenolic Resin(s) (Proprietary)		
LD50 oral rat	> 5000 mg/kg	National Technical Information Service. Vol. OTS0556084
LD50 dermal rat	> 2000 mg/kg	National Technical Information Service. Vol. OTS0556084

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer (Inhalation).

Fiberglass (65997-17-3)	
IARC group	3 - Not classifiable
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

Flame retardant	
IARC group	2B - Possibly carcinogenic to humans, 1 - Carcinogenic to humans

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries	: As packaged, this material does not present significant health hazards. The hazards below apply to the product if aerosols or dusts are generated from cutting, grinding, or smelting. Oxides from metallic fires are a severe health hazard. Inhalation or contact with substance or decomposition product may cause severe injury or death.
Symptoms/injuries after inhalation	: Inhalation of aluminum powder may cause lung effects. Inhalation of metallic dust may be hazardous. Dust and fumes produced during processing should be treated as a dust hazard. This product contains aluminum, which can cause pulmonary fibrosis and lung damage if inhaled as a fine powder, and is complicated by silica and iron oxide dust. Aluminum may also be implicated in Alzheimer's disease. Product will act as a nuisance dust. Inhalation of high concentrations of dust may cause coughing and mild, transitory respiratory irritation.
Symptoms/injuries after skin contact	: Dusts and particulate matter may cause irritation of the skin.
Symptoms/injuries after eye contact	: Dusts and particulate matter may cause irritation of the eyes.
Symptoms/injuries after ingestion	: Not expected to be an important route of entry into the body. Ingestion of large quantities of the product may cause gastric discomfort or distress.
Chronic symptoms	: Persons with a history of chronic lung diseases may be at increased risk from exposure to excessive levels of nuisance dust. 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.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: This product has no known eco-toxicological effects.
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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bio accumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the global warming	: No known ecological damage caused by this product.
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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Waste disposal recommendations : 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.
- Additional information : Empty containers will contain product residues. Observe proper safety and handling precautions. Do not allow empty containers to be used for any purpose except to store and ship original product.
- Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT  
Not regulated for transport

#### Additional information

Other information : No supplementary information available.

#### ADR

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

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Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory except for:

	CAS No	C>=3.00% ; C<=8.50%
Flame retardant		
Nomex Paper	CAS No 25765-47-3	C>=8.00% ; C<=30.00%
Cured Phenolic Resin(s)	CAS No Proprietary	C>=6.00% ; C<=37.00%
Co-Cured Epoxy Resin/Synthetic elastomer	CAS No	C>=8.00% ; C<=20.00%

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de Minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

##### Aluminum (7429-90-5)

Listed on United States SARA Section 313

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

#### 15.2.2. National regulations

#### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

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Fiberglass (65997-17-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

Aluminum (7429-90-5)
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

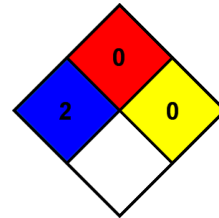
### SECTION 16: Other information

Revision date : 09/15/2015  
 Data sources : ChemIDplus [<http://chem.sis.nlm.nih.gov/chemidplus/rn/116094-23-6>]. GESTIS DNEL Database [[http://dnel-en.itrust.de/nxt/gateway.dll/dnel\\_en/000000.xml?f=templates\\$fn=default.htm\\$vid=dneleng:ddb eng\\$3.0/](http://dnel-en.itrust.de/nxt/gateway.dll/dnel_en/000000.xml?f=templates$fn=default.htm$vid=dneleng:ddb eng$3.0/)].

Full text of H-phrases:

Carc. 1A	Carcinogenicity Category 1A
Carc. 1B	Carcinogenicity Category 1B
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H232	May form combustible dust concentrations in air
H318	Causes serious eye damage
H335	May cause respiratory irritation
H350	May cause cancer

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.  
 NFPA fire hazard : 0 - Materials that will not burn.  
 NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating  
 Health : \* - Chronic Hazard - Chronic (long-term) health effects may result from repeated overexposure  
 Flammability : 0 - Minimal Hazard  
 Physical : 0 - Minimal Hazard

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*