

# A&P Technology

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## ZM55L2800R

Raw Material:	BIAS: CARBON G34-700 WD 12K (.012 K)	(MCCFC)
Diameter:	28.00"	
Braid Angle:	+/- 45°	
Braid Yield:	0.8 ft/lb	
Areal Weight:	833 GSM	
Layer Thickness:	0.037 in (50% Fiber Volume)	

### Sharx<sup>®</sup> Braided Biaxial Sleeveings

A&P Technology is the exclusive manufacturer of Sharx<sup>®</sup> brand braided reinforcement. Sharx<sup>®</sup> braided sleeveings easily and repeatedly conform to the shape of products with changing geometries.

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19A424  
19A425

# Grafil™ Carbon Fiber Size Code "A"

## Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis  
Date of issue: 10/31/2018 Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Article  
Product name : Grafil™ Carbon Fiber Size Code "A"

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Structural material

#### 1.3. Supplier

Mitsubishi Chemical Carbon Fiber and Composites  
5900 88th St.  
Sacramento CA 95828  
USA

#### 1.4. Emergency telephone number

Emergency number : (+1) 916 386-1733 (9:00 am - 5:00 pm, M - F, PST)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin sensitization, Category H317 : May cause an allergic skin reaction  
1

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : H317 - May cause an allergic skin reaction  
Precautionary statements (GHS-US) : P261 - Avoid breathing dust.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P280 - Wear eye protection, protective gloves, protective clothing.  
P302+P352 - If on skin: Wash with plenty of soap and water  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P363 - Wash contaminated clothing before reuse.  
P501 - Dispose of contents/container to an authorized waste collection point

#### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : This product is an "article" as defined in US OSHA HazCom (GHS) 25 May 2012, and is therefore out of scope of its requirements. During mechanical operations involving this product, airborne fibers and dust may be generated. Carbon fibers and dust may cause irritation and itching of the skin and eyes.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Carbon fibers	(CAS-No.) 7440-44-0	90 - 100	Not classified



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

Methods for cleaning up : Shovel or sweep up and put in a closed container for disposal. After all material has been collected, the area should be vacuumed with HEPA filter-equipped apparatus.

### 6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Provide appropriate exhaust ventilation at places where dust is formed. Drilling, cutting or reshaping of the product will generate dust. Avoid dust formation. Avoid breathing dust. Avoid contact with skin, eyes and clothing.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

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

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use.

Incompatible materials : Strong oxidizing agents. Strong acids. Aliphatic amines.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Dust		
ACGIH	Local name	Particles Not Otherwise Specified
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> inhalable 3 mg/m <sup>3</sup> respirable
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> Total dust 5 mg/m <sup>3</sup> Respirable Fraction
OSHA	OSHA PEL (TWA) (ppm)	15 mppcf
OSHA	Remark (OSHA)	Table Z-3
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded. Provide appropriate exhaust ventilation at places where dust is formed.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Protective gloves. Latex. Gloves should be removed and replaced if there are any signs of degradation or breakthrough.

#### Eye protection:

In case of dust production: protective goggles

#### Skin and body protection:

Long sleeved protective clothing

#### Respiratory protection:

Not required for normal conditions of use. In case of inadequate ventilation: Use an approved air purifying respirator to control exposure. Follow respirator protection requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.



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Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight ≤ 700) (25068-38-6)	
LD50 oral, rat	> 2000 mg/kg
LD50 dermal, rabbit	> 22800 mg/kg

Carbon fibers (7440-44-0)	
Additional information	LC50, Inhalation, rat: > 64.4 mg/kg (Calgon Carbon Corp.) LD50, oral, rat: ≥ 10,000 mg/kg (Calgon Carbon Corp.) LD50, intravenous, mouse: 440 mg/kg TDLo, Reproductive toxicity, subcutaneous, rat, female: 167,000 mg/kg (8 days, continuous)

Bisphenol A (80-05-7)	
LD50 oral, rat	≈ 5000 mg/kg
LD50 dermal, rabbit	≈ 3000 mg/kg
LC50 inhalation, rat (mg/l)	170 mg/m <sup>3</sup> - 6 Hours

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified

Bisphenol A (80-05-7)	
Specific target organ toxicity – single exposure	May cause respiratory irritation.

Specific target organ toxicity – repeated exposure	: Not classified
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Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available

Potential Adverse human health effects and symptoms	: Dust may cause mechanical irritation of the eyes, skin and upper respiratory tract. May cause an allergic skin reaction.
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## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Not classified.
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Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight ≤ 700) (25068-38-6)	
EC50 Daphnia	≈ 2 mg/l - 48 Hours (Daphnia magna)

Bisphenol A (80-05-7)	
LC50 fish	4.6 mg/l - 96 Hours (Pimephales promelas)(OECD 203 method)
EC50 Daphnia	10.2 mg/l - 48 Hours (Daphnia magna)(E07-04, ASTM E-35.21)
EC50 other aquatic organisms 1	1.1 mg/l - 96 Hours (Americamysis bahia)(E07-04)
LC50 fish 2	9.4 mg/l - 96 Hours (Menidia menidia)(OECD 203 method)
NOEC (chronic)	0.025 mg/l - 328 days (Marisa cornuarietis)
NOEC chronic fish	0.016 mg/l - 444 days (Pimephales promelas)(EPA OPP 72-5)
NOEC chronic crustacea	0.17 mg/l - 28 days (Americamysis bahia)

### 12.2. Persistence and degradability

Grafil™ Carbon Fiber Size Code “A”	
Persistence and degradability	No data available.



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<b>Carbon fibers (7440-44-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>4,4'-Isopropylidendiphenol, polymer with 2,2-Bis(p-(2,3-epoxypropoxy)phenyl)propane (25036-25-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
<b>Bisphenol A (80-05-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2. International regulations

#### CANADA

<b>Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight ≤ 700) (25068-38-6)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Carbon fibers (7440-44-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>4,4'-Isopropylidendiphenol, polymer with 2,2-Bis(p-(2,3-epoxypropoxy)phenyl)propane (25036-25-3)</b>
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

**⚠ WARNING:** This product can expose you to Bisphenol A, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Component	Carcinogenicity	Developmental toxicity	Reproductive toxicity male	Reproductive toxicity female	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Bisphenol A(80-05-7)			X	X		

Component	State or local regulations
Carbon fibers(7440-44-0)	
Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight ≤ 700)(25068-38-6)	
4,4'-Isopropylidendiphenol, polymer with 2,2-Bis(p-(2,3-epoxypropoxy)phenyl)propane(25036-25-3)	
Bisphenol A(80-05-7)	U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16: Other information

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Data sources : US OSHA HazCom (GHS) 25 May 2012.  
 Other information : None.