MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Family**:** Product Name

- **Chopped strand:** Tech-Strand ™
- **Direct Draw:** Tech-Strand ™
- **Gun Roving:** Tech-Strand ™
- **Woven Roving:** Tech-Strand ™
- **Knitted Fabrics:** Tech-Strand ™

Chemical Name: Mixture
CAS No.: None Assigned
Common Name: Fiber Glass
Textile Fiber Glass
Continuous Filament Glass Fibers
Product Use: Reinforcements for various resin systems

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EDITION NO.:1

OMNI Composites, LLC.
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2. COMPOSITION INFORMATION ON INGREDIENTS

Chemical Name: Glass, Oxide, Chemicals Case No.: None Assigned Common Name: Textile Fiber Glass: Continuous Filament Glass Fibers Percent in Product: Approx. 98% by weight (Except: Chopped Strand Mats: Approx. 92%)

LD50: N/A

LC50:	N/A		
Exposure Limits:	**OSHA PEL**	**ACGIH TLV TWA**	**NIOSH REL**
	Total Nuisance Dust: 15 mg/m3 Respirable Nuisance Dust: 5 mg/m3	Synthetic Vitreous Fibers: 1 f/cc (continuous filament glass fibers)	Total Glass Dust: 5mg/m3Respirable Fibers: 3 f/cc
Chemical Name:	Organic Polymer Solids (Cured)		
CAS No:	None Assigned		
Common Name:	Size Materials-cured		
Percent in Product:	Approximately 2% by weight		

LD50: N/A

LC50: N/A

Exposure Limits:

OSHA PEL	None
ACGIH TLV TWA	None
NIOSH REL	None

Chemical Name:	For Chopped Strand Mat, binder contains: Anhydrous Silica
CAS No.:	7631-86-9
Common Name:	Solid Unsaturated Polyester Resin
Percent in Product	Type: EMC-up to 5.5%

LD50: N/A

LC50: N/A

Exposure Limits:

OSHA PEL	None
ACGIH TLV TWA	None
NIOSH REL	None

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

	Health	**Fire**	**Reactivity**	**Degree of Hazard**

NFPA Rating	0	0	0	0-Minimal (Insignificant)
HMIS Rating	1	0	0	1-Slight
				2-Moderate
				3-Serious (High)
				4-Severe (Extreme)
				5-Chronic Health Effort(s)

POTENTIAL HEALTH EFFECTS

Primary Routes of Entry: Inhalation, skin and eye contact.

Acute Inhalation: Temporary upper respiratory irritation.

Chronic Inhalation: None known.

Acute Skin Contact and Sensitization: Temporary skin irritation seen in certain individuals

Chronic Skin Contact: None known.

Skin Absorption: None.

Acute Eye Contact: Temporary eye irritation.

Chronic Eye contact: None Known.

Acute Ingestion: Unlikely-Contact physician if unusual reaction is noted.

Chronic Ingestion: None known.

Medical Conditions Which May Be Aggravated: Pre-existing conditions which may be aggravated by mechanical irritants upon inhalation or skin contact.

Carcinogenicity:

Ingredient: Textile or Continuous Fibrous Glass

NTP: Not Listed

IARC: Not Classifiable - Group 3

OSHA: Not Listed

Mutagenicity: None

Teratogenicity: None

Reproductive Toxicity: None

4. FIRST AID MEASURES

Inhalation: Remove from exposure. Get medical help if irritation persists.
Eye Contact: Flush well with running water for at least 15 minutes. Get medical help if irritation persists.
Skin Contact: Cleanse with soap and water. Get medical help if irritation persists.
Ingestion: Unlikely. Consult physician if unusual reaction is noted.
Fires: Remove to fresh air. Administer oxygen and get medical help.
Information for Medical Practitioners: Skin irritation responds well to mild hydrocortisone area.

5. FIRE FIGHTING MEASURES

Flash point ('F') and Method: Does not support combustion
Flammable Limits: LEL: N/A UEL: N/A
Autoignition Temperature: Does not support combustion
Extinguishing Media: Use that which is applicable to surrounding fire.
Special Fire Fighting procedures: Fire fighters must wear full protective gear including eye protection and self-contained breathing apparatus.
Unusual Fire and Explosion Hazard: Size materials may thermally decompose or burn emitting toxic fumes and smoke including carbon dioxide and carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Spills/Leaks: Vacuum dust deposits.
Accidental or Unplanned Releases: Clean area with vacuum.

7. HANDLING AND STORAGE

Handling: When handling and/or applying this product:

- Wear long sleeves, gloves and cap.
- Wear eye protection (goggles, safety glasses or face mask).
- Use a NIOSH/MSHA approved dust respirator such as 3M model #8710 or #9900 or equivalent.

After handling and /or applying this product:

- Bathe with soap and warm water.

- Wash work clothes separately and rinse washer after use.

Storage: Store under cover to protect product.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Personal Protective Equipment:

Respirators: Wear NIOSH/MSHA approved respirators when handling and applying fiber glass products in accordance with the following NIOSH based exposure guidelines:

Exposure	**Respirator (or equivalent)**
Less than 10 times NIOSH REL	3M 8710 OR 3M 9900
Less than 50 times NIOSH REL	MSA Ultra Twin Full-Face Respirator with type H filter(HEPA)

Product Package label:

CAUTION:

Skin Irritation: Fiber glass may cause temporary skin irritation. Wear long sleeves, gloves and eye protection when handling and applying material. Cleanse skin with soap and warm water after handling. Wash work clothes separately and rinse washer.

Dust Irritation: A disposable mask designed for nuisance type dusts must be used when handling and applying material in order to prevent irritation to the nose or throat due to dust and airborne particles.

Work Practices and Engineering Controls: Avoid spread of fiber glass dust. For some fabrication operations where dust is generated, provide general and/or local exhaust ventilation to control airborne dust levels below exposure limits.

Other: When glass fiber is used as reinforcement in plastic materials, caution must also be exercised with the resin and curing catalysts employed and the mixing process used to disperse the fiber in the resin. When the glass fiber reinforced material is abraded or

machined, control of the released dust must be established.

Additional respiratory protection may be necessary for protection from vapors and mists emitted from these resins and catalysts.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid
Vapor Density (Air=1): Not measurable
Boiling Point (˚F): > 1600˚F
Specific Gravity (H2O=1): Glass=2.6
Melting Point (˚F): > 1600˚F
Evaporative Rate (ethyl ether=1): Does not have vapor pressure
Softening Point (˚F): > Approx. 1550˚F
Vapor Pressure: Does not have vapor pressure
Freezing Point: None
% Volatile by Volume (mmH3@20˚C): Not volatile
Odor: None
% Solubility (in water): Small
Odor Threshold: None
pH: Neutral
Color: White
Coefficient of Water to Oil Distribution: None
Appearance: Fibers assembled into rovings, mats, yarns, fabrics, chopped strands.

10. REACTIVITY

Stability: Chemically stable
Corrosivity: Not corrosive
Reactivity: Not reactive
Reactivity with water: Not reactive
Incompatible Substances: Hydrofluoric Acid

11. TOXICOLOGICAL INFORMATION

Extensive medical-scientific research has been conducted regarding the health aspects of fiber glass over the past 50 years. The International Agency for Research on Cancer (IARC), an agency of the World Health Organization (WHO), at a meeting in June 1987, reviewed all of the significant research on the health effects attributed to fiber glass. IARC determined that the data from both human and animal studies was inadequate to classify continuous filament glass fibers such as used in Fiber Glass Reinforcement products, as carcinogenic to humans.

12. ECOLOGICAL INFORMATION

This product is not manufactured with, nor does it contain any Class I Ozone depleting chemicals as defined by EPA in Title VI of the Clean Air Act Amendments of 1990 40 CFR Part 82, Protection of Stratospheric Ozone. This product is not classified as a hazardous air pollutant in Title III Clean Air Act of 1990.

13. WASTE DISPOSAL CONSIDERATIONS

Scrap material should be disposed of in a sanitary landfill in accordance with federal, state and local regulations. Waste material is not considered hazardous as defined by RCRA (40 CFR Part 261).

14. TRANSPORTATION INFORMATION

National Motor Freight Classification (NMFC): 1714100, Rovings or yarn, glass fiber or strand, glass fiber in continuous lengths or chopped; in packages.

15. REGULATORY INFORMATION

As this product is considered a mixture, each component is listed below identifying its status:

CHEMICAL NAME	Fiberglass textile	Anhydrous Silica No. 7631-86-9
SARA Title III Section 313	—	—
SARA Title III Section 302	—	—
California Proposition 65	√	—
Canada DSL	—	—
Canada NDSL	√	—

Korea KECI	√	—
Europe EINECS	√	—
Japan MITI	√	—
Philippines PICCS	√	—
Australia AICS	√	—
USA TSCA	√	—

16. ADDITIONAL COMMENTS

Acronyms / definitions used in this MSDS:

ACGIH: American Conference of Governmental Industrial Hygienists

CAS No.: Chemical Abstracts Service Number

EPA: Environmental Protection Agency

f/cc: Fibers per cubic centimeter

HEPA: High Efficiency Particulate Air (filter)

HMIS: Hazardous Material Identification System

IARC: International Agency for Research on Cancer

LC_{50}: The air concentration of a substance, when administered over a specified time period in an animal assay, is expected to cause the death of 50% of a defined animal population.

LD_{50}: The single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause the death of 50% of a defined animal population.

LEL: Lower Explosive Limit

mg/m^3: Milligrams per cubic meter

MSHA: Mine Safety & Health Administration

N/A: Not Applicable

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

RCRA: Resource Conservation and Recovery Act

REL: Recommended Exposure Limit

SARA: Superfund Amendments and Reauthorization Act
Title III: Emergency Planning and Community Right to Know Act, Section 302 - Extremely Hazardous Substances, Section 313 - Toxic Chemicals
TLV: Threshold Limit Value
TSCA: Toxic Substances Control Act (USA)
TWA: Time Weighted Average
UEL: Upper Explosive Limit
WHO: World Health Organization
Australia AICS: Australian Inventory of Chemical Substances
California Proposition 65: California Title 22, Division 2, Chapter 3 Safe Drinking Water and toxic Enforcement Act of 1986.
Canada DSL: Canadian Domestic Substance List
Canada NDSL: Canadian Non-domestic Substance List
Europe EINECS: European Inventory of Existing Commercial Chemical Substances
Japan MITI: Ministry of International Trade and Industry
Korea KECI: Korean Existing Chemicals Inventory
Philippines PICCS: Philippine Inventory of Chemicals and Chemical Substances
Respirable Dust: The respirable fraction of suspended airborne particulates
Respirable Fibers: Suspended airborne particulates with diameters of 3 micrometers or less, lengths of 5 micrometers or more and 5:1 length-to-width aspect ratio (NIOSH 7400 method, B rules)
Total Dust: Suspended airborne particles of “nuisance” dusts including those of non-respirable size
Total Glass Dust: Suspended airborne particles of dust composed of glass only, including those of non-respirable size

17. DATE SHEET PREPARATION

This Material Safety Data Sheet has been prepared by department of health and security of:
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