



SAFETY DATA SHEET

BGF-211

Date prepared: 5/31/2015

Section 1: Identification

Chemical Product Name/Identifier: Laminated Aramid Composite

Finish: A505 (All Versions)

CAS Number: 26125-61-1

Synonyms: Laminated p-Aramid

Recommended Use and Restrictions on Use: Woven textile product used for reinforcement in various resin systems

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Section 2: Hazards Identification

OSHA HCS Status: This product is not hazardous chemical, as defined by OSHA at 29 CFR 1910.1200. The finished product has not been tested.

Relevant Route of Exposure/Target Organs: Dermal, Inhalation

OSHA/GHS Signal Word and Hazard Statements: None

OSHA/GHS Classification and Pictograms: None

OSHA/GHS Precautionary Statements:

Prevention

Avoid breathing fibers or dust. Use only outdoors or in a well-ventilated area. Keep containers tightly closed.

Response

If inhaled: Remove victim to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

Storage

Store in a well-ventilated place. Store locked up. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

GHS Hazard and Precautionary Statement Codes: See Section 16.

Section 3: Composition/Information on Ingredients

Chemical Product Name: Laminated Aramid Composite

Synonyms: Laminated p-Aramid

| Component | CAS # | Max % by weight |
|---|--------------|-----------------|
| Poly (terephthaloychloride/p-phenylenediamine | 26125-61-1 | 95.0 |
| Textile sizing and lubricants | Not assigned | 0.5 |
| Absorbed water | Not assigned | 1.5 |
| Polyolefin | Not assigned | 10.0 |

Note: The exact concentrations of the above listed chemicals are being withheld as a trade secret.

Section 4: First-Aid Measures

Skin Contact: Flush with ample cool water followed by washing with mild soap to remove accumulated fibers.

Eye Contact: Flush with flowing water for 15 minutes – seek medical attention if necessary.

Inhalation: Move to fresh air.

Ingestion: Not likely to occur through normal use. Should ingestion occur, seek medical attention.

Most Important Symptoms/Effects: Direct skin contact with fibrous glass or its dust may cause mechanical irritation and transitory dermatitis. Breathing of fibers or dust may cause mechanical irritation of the mouth, nose, and throat.

Indication of Immediate Medical Attention and Special Treatment Needed: Get medical attention if product comes into contact with skin or eyes, or if it is inhaled or ingested.

Section 5: Fire-Fighting Measures

Extinguishing Media: Water, dry powder, or foam (needed for packaging only).

Hazardous Combustion Products: CO, CO₂, and low molecular weight hydrocarbons.

Protective Equipment: Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

Fire Fighting Procedures/Precautions: Aramid itself will not support combustion, but in a sustained fire, proper protection against products of combustion from the fuel must be worn.

Section 6: Accidental Release Measures

Personal Precautions: A release of this product is not expected to pose risks to workers under normal circumstances. If the material is involved in a fire, or if dusts are produced, no action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment.

Protective Equipment: Wear protective gloves/eye protection/skin protection.



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Methods/Materials for Containment and Cleaning Up: Dust or loose fibers can be vacuumed or swept with the aid of a dust suppressant. Dispose of in accordance with all government regulations. Do not discharge into waterways or sewer systems without proper authority.

Section 7: Handling and Storage

Precautions: This product should be handled under conditions of good industrial hygiene and in conformity with any local regulations to avoid unnecessary exposure. Use in a well-ventilated area. Do not breathe dust. Avoid contact with skin.

Storage: Store in a well-ventilated, dry location.

Section 8: Exposure Controls/Personal Protection

Exposure Limits: p-Aramid fibers as such are not subject to any exposure regulation.

| Component | AEL ^a | AEL ^a |
|---------------------|------------------------------|--|
| Aramid dust/fibers* | 2 RFP/cc (Respirable Fibers) | 5 mg/m ³ (Non-fibrous particulate and/or non-respirable fibers) |

* Dust may be produced during handling

a. DuPont's Acceptable Exposure Limit.

Engineering Controls: Normal area ventilation is sufficient in most cases to keep dust and fiber levels below the AEL.

Personal Protection Measures/Equipment:

Skin Protection – Barrier creams, gloves, and long sleeve loose fitting clothing may be required for certain workers who have sensitive skin or contact dermatitis. Work clothing should be laundered separately from other clothing before reuse.

Eye Protection – Not normally required, but as a good safety work practice, eye protection such as safety glasses/side shields or equivalent whenever use of the product releases airborne fibrous aramid.

Respiratory Protection – MSHA/NIOSH approved respiratory protection can be used.

Other Protection – Observe good personal hygiene.

Section 9: Physical and Chemical Properties

Appearance (physical state, color, etc.): Solid, yellow

Odor: Odorless

Odor Threshold: None

pH: None



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Melting Point/Freezing Point: - Polyolefin (melts between 212°F and 350°F)
- Aramid (does not melt)

Initial Boiling Point: Not applicable

Flash Point: Not applicable

Evaporation Rate: Not applicable

Flammability: Not applicable

Upper/Lower Flammability or Explosive Limits: Not applicable

Vapor Pressure: Not applicable

Vapor Density: Not applicable

Relative Density/Specific Gravity: Not known

Solubility: Insoluble

Partition Coefficient: Not known

Auto-ignition Temperature: Not known

Decomposition Temperature: >932°F (500°C) for Aramid

Volatility: Not known

Viscosity: Not applicable

Section 10: Stability and Reactivity

Stability: Stable at ambient temperatures. Not self-reactive, water-reactive, or spontaneously combustible

Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid: Strong bases and acids will cause chemical decomposition. Temperatures over 932°F (500°C) will cause decomposition.

Incompatible Materials: Aromatic polyamides react with strong oxidizing agents. Over time, UV light will cause a darkening of the fabric and adversely affect the strength.

Hazardous Decomposition Products: May produce carbon oxides, organic compounds of low molecular weight and hydrogen cyanide in low concentration.

Hazardous Polymerization: Will not occur under normal temperatures.

Section 11: Toxicological Information

Relevant Route of Exposure/Target Organs: Dermal, Inhalation

Symptoms: Dust may cause irritation.

Delayed and Immediate Effects: Not known

Chronic Effects (Short and Long Term Exposure): Not known



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Numerical Measures of Toxicity:

p-Aramid : Oral LD₅₀ (rat): >7,500 mg/kg

Carcinogenicity: None of the ingredients present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

Mutagenicity: No data available

Reproductive Toxicity: No data available

Section 12: Ecological Information

No data available

Section 13: Disposal Information

Do not discharge into waterways or sewer systems without proper authority. Dispose of in accordance with all government regulations.

Section 14: Transport Information

Not regulated as a hazardous material/dangerous good for transportation in all modes of transportation (US DOT, ICAO/IATA, IMO).

Section 15: Regulatory Information

TSCA Inventory Status: Exempt per section 8(a), 710.2(f), and 704.5(a)

SARA Title III Section 302: None

SARA Title III Section 304: None

SARA Title III Section 311/312 Hazard Categories: Immediate (acute)

SARA TITLE III Section 313: This product does not contain components that are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (EPCRA or SARA Title III) and 40 CFR 372.

CERCLA RQ: Not listed

California Proposition 65: None known

Massachusetts Right-To-Know: Less than reportable quantity

New Jersey Right-To-Know: Less than reportable quantity

Pennsylvania Right-To-Know: Less than reportable quantity

Canada: All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the Canadian DSL.

Europe: All components of this product are included on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are not required to be listed on the EINECS.

China: All components of this product are included on the Chinese Inventory (IECSC) or are not required to be listed on the Chinese IECSC.



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Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean ECL.

Philippines: All components of this product are included on the Philippine (PICCS) or are not required to be listed on the Philippine PICCS.

Australia: All components of this product are included on the Australian (AICS) or are not required to be listed on the Australian AICS.

Section 16: Other Information

Date of Preparation or Revision: 5/31/2015

This product is classified as a Skin Irritant Category 3, however OSHA does not include Category 3 substances in its hazard classification system.

GHS Label Hazard Statement Codes

Signal Word: WARNING

H316: Causes mild skin irritation

H335: May cause respiratory tract irritation.

GHS Label Precautionary Statement Codes

P261: Avoid breathing dusts or fibers.

P271: Use only outdoors or in well-ventilated area.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Abbreviations

ACGIH/TLV American Conference of Industrial Hygienists Threshold Limit Value

CAS Chemical Abstracts Service

CERCLA Comprehensive Environmental Response Compensation and Liability Act

CFR US Code of Federal Regulations

DOT US Department of Transportation

EPCRA Emergency Planning and Community Right to Know Act

GHS UN Globally Harmonized System of Classification and Labeling of Chemicals



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| HCS | Hazard Communication Standard |
| IARC | International Agency for Research on Cancer |
| ICAO/IATA | International Civil Aviation Organization/International Air Transport Association |
| IMO/IMDG | International Maritime Organization/International Maritime Dangerous Goods Code |
| LD ₅₀ | Lethal dose to half of test animals |
| NTP | National Toxicology Program |
| OSHA | US Occupational Safety Health Administration |
| PEL | Permissible exposure limit |
| RQ | Reportable quantity |
| SARA | Superfund Amendments and Reauthorization Act |
| SDS | Safety data sheet |
| TSCA | Toxic Substances Control Act |
| UN | United Nations |
| US/USA | United States |

While this company believes that the data contained herein are factual and the opinions expressed are based on tests and data believed to be reliable, it is the user's responsibility to determine the safety, toxicity, and suitability for his or her own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by this company as to the effects of such use, the results to be obtained, or the safety and toxicity of the product, nor does this company assume any liability arising out of use, by others, of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or governmental regulations.