

LAST-A-FOAM® FR-3700

Performance Core Series



PRODUCT OVERVIEW

LAST-A-FOAM® FR-3700 is a CFC-free, rigid, closed-cell, flame-retardant polyurethane foam available in densities ranging from 3 to 40 pounds per cubic foot.

Tougher and less friable than other rigid foam materials, this aerospace-grade, BMS 8-133-qualified foam enables cutting of crisper edges, making it well-suited to machining complex shapes for composite cores. It exhibits a high strength-to-weight ratio due to its cellular structure and cross-linked resin. Because of its closed-cell structure, LAST-A-FOAM® FR-3700 has excellent resistance to water absorption and will not swell, crack, or split on exposure to water. LAST-A-FOAM® FR-3700 provides exceptional protection for hazardous cargo and payloads as an impact- and fire-insulation liner in transport or packaging containers. It also serves as human bone test media.

CHEMICAL RESISTANCE

LAST-A-FOAM® products exhibit very good resistance to a wide range of chemicals and solvents. Common petroleum products such as oil or gasoline have no effect on LAST-A-FOAM®. Some chlorinated solvents will cause LAST-A-FOAM® to temporarily swell or soften, which can be useful in some applications. LAST-A-FOAM® is a thermoset material that is resistant to fungal growth and will not break down over time. If you need specific advice regarding chemical resistance, please contact us.

MATERIAL HANDLING & SAFETY STORAGE

Rigid LAST-A-FOAM® should be stored as any other combustible organic solid. Storage precautions for wood are adequate. Scrap and waste LAST-A-FOAM® materials are inert and can be disposed of as ordinary solid waste. However, cutting, planing, shaping, routing and sanding LAST-A-FOAM® produces dust. The inhaling of foam dust, as with any dust, should be avoided. Safety equipment appropriate for use in avoiding dust inhalation should be used when working with LAST-A-FOAM®.

FIRE SAFETY

Although LAST-A-FOAM® rigid polyurethane foam is flame retardant, it is an organic material which will burn in the presence of enough heat and oxygen. The Federal Aviation Regulation (FAR) 25.853 flame test is commonly used to assess the relative burning characteristics of foam plastic materials under controlled laboratory conditions. LAST-A-FOAM® FR-3700 meets the FAR 25.853 12-second and 60-second ignition requirements.



PRODUCT FEATURES

- Stable
- Inert
- Resistant to most chemicals and solvents
- Easily shaped with common woodworking tools
- Performs well as wood replacement

APPLICATIONS

- Models and design prototypes
- Composite core
- Honeycomb edge close-out for aircraft
- Interior sandwich panels used in overhead storage bins, passenger cabin class dividers, galleys and lavatories
- Vacuum form dies and mold patterns

*Call us at 866.825.1378
today for a quote!*

PRODUCT PROPERTIES

| | |
|---|---|
| Product Temperature Use Range: | -320°F to +250°F |
| | (-195°C to +121°C) |
| Coefficient of Linear Thermal Expansion: | ~34 x 10 ⁻⁶ in/in/°F |
| | (75°F to +250°F range, all densities) |
| Closed-Cell Content: | 95% @ 3 lbs/ft ³ |
| (Per ASTM D-2856, Procedure B) | 98% @ 25 lbs/ft ³ |
| Thermal Conductivity (initial): | k-factor |
| (ASTM C-518 at 75°F mean temperature) | (BTU/Hr-ft ² -°F/in.) |
| (The last two digits of product numbers describe foam density in pounds per cubic foot) | |
| LAST-A-FOAM® FR-3703 | 0.198 |
| LAST-A-FOAM® FR-3706 | 0.205 |
| LAST-A-FOAM® FR-3710 | 0.213 |
| LAST-A-FOAM® FR-3718 | 0.324 |
| LAST-A-FOAM® FR-3720 | 0.349 |
| LAST-A-FOAM® FR-3725 | 0.414 |
| LAST-A-FOAM® FR-3730 | 0.478 |
| LAST-A-FOAM® FR-3740 | 0.606 |
| Hardness, Shore-D (cut foam surface) | 5.7 @ 3 lbs/ft ³ |
| | 71.6 @ 40 lbs/ft ³ |
| Tumbling Friability | 23.6% @ 3 lbs/ft ³ |
| ASTM C-421 (tested 20 minutes @ 60 rpm) | 0.0% @ 40 lbs/ft ³ |
| Water Absorption: | 0.02 lbs/ft ² @ 3 lbs/ft ³ |
| (Per ASTM D-2842) | 0.01 lbs/ft ² @ 18 lbs/ft ³ |
| Dielectric constant (1.0 MHz): | 1.05 @ 3 lbs/ft ³ to 1.40 @ 20 lbs/ft ³ |

DISCLAIMER: This data is subject to revision and changes due to development of and changes to the material. The data is derived from tests and historical usage. The data is average data and should be treated as such. Calculations should be verified by actual tests. The data is furnished without liability for the company and does not constitute a warranty or representation in respect to the material or its use. The company reserves the right to release new data sheets in replacement.

LAST-A-FOAM® FR-3700 meets the requirements of several aerospace and military specifications. We can supply certificate of conformance and test data upon request. General Plastics is certified to ISO 9001:2008/AS9100C and meets such demanding quality systems as NQA-1, MIL-I-45208A and Boeing Company D6-82479.

FR-3700 SHEET SIZES AND WORKMANSHIP STANDARDS

LAST-A-FOAM® FR-3700 series foams are available in densities of 3 to 40 pounds per cubic foot (pcf).

| Commercial cutting tolerance | 48" x 96" Sheets (3-20 pcf) | 48" x 96" Sheets (21-40 pcf) | 18" x 100" Sheets |
|--|-----------------------------|------------------------------|-------------------|
| 0.0" to 2.0" thick | ± 0.030" | ± 0.060" | ± 0.030" |
| over 2.0" thick | ± 0.060" | ± 0.060" | ± 0.060" |
| -0"/+0.50" on length, -0"/+0.25" on width dimensions | | | |
| Aircraft cutting tolerance | 48" x 96" Sheets (3-15 pcf) | 48" x 96" Sheets (16-40 pcf) | 18" x 100" Sheets |
| 0.0" to 1.0" thick | ± 0.015" | ±0.030" | ± 0.005" |
| 1.1" to 2.0" thick | ± 0.030" | ±0.030" | ± 0.010" |
| over 2.0" thick | ± 0.030" | ±0.060" | ± 0.020" |
| -0"/+0.50" on length, -0"/+0.25" on width dimensions | | | |



Where Great Ideas Take Shape

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All General Plastics products are manufactured in the United States, and are free of CFCs and VOCs.

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