

LAST-A-FOAM® FR-7100

GENERAL PLASTICS MANUFACTURING COMPANY

MODELING, TOOLING, CNC-PROOFING FOAM



Product Description:

LAST-A-FOAM® FR-7100 is a unique, fine-celled high-density polyurethane foam intended for proofing NC/CNC machine programs, prototype models, and other modeling applications where a versatile, stable, grain-free stock material is desired.

It is supplied in 4, 6, 8, 10, 12, 15, 18, 20, 25, 30 and 35 pound per cubic foot densities, in sheet thickness up to 12.0".

Standard sheet sizes: 48" x 48" and 48" x 96". 25 and 30 pound per cubic foot densities are available in 24" x 48" and 24" x 96" sheet sizes only.

Special sheet and block sizes are available —we will gladly quote on request.

PRODUCT BENEFITS

- Excellent medium for creating models and prototypes of all kinds.
- Exceptionally fine cell structure enhances paintability and finishing.
- Closed-cell, easily bonded and finished with a wide variety of adhesives and coatings.
- Low cost material for checking accuracy of machine-tool operations.
- Dimensionally stable, grain-free, easy to shape with a variety of cutting processes.
- Choice of densities allows control of weight and cost of models and tooling.
- Low-density type hand-carves and shapes with common woodworking tools.
- Higher densities for cutting with powered or CNC tools where more accuracy is desired.

PRODUCT DATA

Description: Rigid polyurethane foam

Appearance: Off-white color rigid foam, odorless

Standard Sheet Sizes: 1.0 inch to 12.0 inches thick, 24" x 96",
(Other sizes available on request.) 48" x 48", 48" x 96" standard stock available.

Available Densities:

| | |
|---------|-------------------------|
| FR-7104 | (4 lb. per cubic foot) |
| FR-7106 | (6 lb. per cubic foot) |
| FR-7108 | (8 lb. per cubic foot) |
| FR-7110 | (10 lb. per cubic foot) |
| FR-7112 | (12 lb. per cubic foot) |
| FR-7115 | (15 lb. per cubic foot) |
| FR-7118 | (18 lb. per cubic foot) |
| FR-7120 | (20 lb. per cubic foot) |
| FR-7125 | (25 lb. per cubic foot) |
| FR-7130 | (30 lb. per cubic foot) |
| FR-7135 | (35 lb. per cubic foot) |

Coefficient of Linear Thermal Expansion: $3.5 - 5.0 \times 10^{-5}$ between -310°F and $+200^{\circ}\text{F}$.

Chemical Resistance: Resists virtually all chemicals and solvents
except strong acids and bases.

| | | |
|------------------------------|---|------------------------|
| Dimensional Stability | FR-7104, FR-7106, FR-7108, and FR-7110: | Good to very good |
| | FR-7112, FR-7115, FR-7118, and FR-7120, | Very good to excellent |
| | FR-7125, FR-7130, FR-7135 | Very good to excellent |

BONDING, FILLING, AND SEALING LAST-A-FOAM® PRODUCTS

LAST-A-FOAM® FR-7100 can be bonded, filled, sealed and painted with a wide variety of commercially available finishing products. Our customers report greatest success with automotive and wood finishing materials, but the range of usable products is not limited to those types. General Plastics Manufacturing Company has prepared a “**Guide to Bonding, Filling, and Sealing Last-A-Foam® Products**”, available on request, to help with making appropriate finishing material selections. You should also follow manufacturer’s safety instructions when using any bonding, filling or finishing product with **LAST-A-FOAM®**, and observe their recommended precautions.

All rigid **LAST-A-FOAM®** products are made from polyurethane resins. One of the best characteristics of polyurethane is chemical resistance, allowing use of a wide variety of adhesives to bond foam with little risk of damage. Also, all rigid **LAST-A-FOAM®** is **closed-cell**, and very resistant to solvent penetration.

Use of solvent-based adhesives to bond LAST-A-FOAM® is not recommended, as solvents are unable to escape the bond line, and poor bonds will occur. An exception to this would be **Contact Cements**, which are allowed to dry before bonding takes place.

The best adhesive materials to use in bonding rigid **LAST-A-FOAM®** foam products are **room-temperature curing reactive adhesives, i.e., adhesives which cure in the bond joint**. These following adhesive types are reactive adhesives:

- Epoxies
- Polyurethane Adhesives
- Cyanoacrylate (“superglue”)
- Acrylic Adhesives
- Contact Cements

MATERIAL HANDLING AND STORAGE SAFETY CONSIDERATIONS

When storing and handling rigid **LAST-A-FOAM®**, it should be treated as you would any possibly combustible organic solid. Storage precautions for wood are fully adequate when used with **LAST-A-FOAM®**. Scrap and waste **LAST-A-FOAM®** materials are inert and can be disposed of as you would ordinary solid waste.

Rigid **LAST-A-FOAM®** is essentially chemically inert, as the ingredients used to make it react completely during the manufacturing process. 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®**

IMPORTANT NOTICE TO PURCHASER: Test values shown in this document are not to be used for setting specifications. All statements, technical information, and data are based on testing we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. Users should perform their own tests on their own designs incorporating these materials to determine suitability for use in their application.

**MANUFACTURERS AND MOLDERS OF
LAST-A-FOAM® HIGH DENSITY RIGID
AND FLEXIBLE POLYURETHANE FOAMS**

AND

**FABRICATORS OF PLASTIC SHEETS
FOR AIRCRAFT, INDUSTRIAL, CONSTRUCTION, MARINE,
NUCLEAR, SHIPPING AND MODELING INDUSTRIES**

WARRANTY

General Plastics warrants only that the products it ships to the buyer will, at the time of shipment, meet the specifications as stated in the sales contract and be free from defects in material and workmanship. Typical physical properties as stated in product data sheets are to be considered as representative "nominal" values and should not be treated as specifications. While all the product data information presented by General Plastics is believed to be reliable and to represent the best available physical property data on the products, the warranty of General Plastics is limited to the above expressed warranty. GENERAL PLASTICS MAKES NO OTHER GUARANTY, WARRANTY, OR REPRESENTATION, EXPRESSED OR IMPLIED, AS TO THE CORRECTNESS OR SUFFICIENCY OF ANY INFORMATION, OR AS TO THE MERCHANTABILITY, SUITABILITY OR FITNESS OF ANY PRODUCTS FOR A PARTICULAR PURPOSE. THE USER SHOULD CONDUCT A SUFFICIENT INVESTIGATION TO ESTABLISH THE SUITABILITY OF ANY PRODUCT FOR ITS INTENDED USE. If the products shipped by General Plastics do not conform to this warranty, it will correct the non-conformity by repair or replacement at its option. Liability of General Plastics for all claims, whether arising out of breach of contract, warranty, negligence, strict liability, or otherwise is limited to the purchase price of the material.

CAUTION: The flammability characteristics indicated for LAST-A-FOAM® are obtained from comparative tests, conducted under specific laboratory conditions. The sole purpose of these tests is to establish relative burning characteristics of foam materials. Terms such as "self extinguishing" or "flame spread" used in test data are not intended to reflect the fire hazard of LAST-A-FOAM® under actual use conditions. The test results are not accurate indicators of the flammability of LAST-A-FOAM® in actual fire environments.



GENERAL PLASTICS MANUFACTURING COMPANY
4910 Burlington Way • P.O. Box 9097
Tacoma, Washington 98409

Telephone: (253) 473-5000 Facsimile: (253) 473-5104
(800) 806-6051

See our World Wide Web Site at:

www.generalplastics.com

E-mail address: sales@generalplastics.com