



# PROCESS ECONOMICS PROGRAM

SRI INTERNATIONAL  
Menlo Park, California  
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## Abstract

Process Economics Program Report No. 97A

### FOAMED PLASTICS

(January 1984)

Foamed plastics comprise a broad group of cellular products that have a wide range of properties. They are used increasingly, for example, in heat and sound insulation, energy absorption, and consumer disposal items (such as foamed cups), and as wood and metal replacements (for furniture, shutters, and business machine and personal computer housings). This report presents the process economics for the production of the following nonstructural, structural, and thermoformed foam products:

- Nonstructural foam products
  - Polystyrene foam boards by preexpansion processes
  - Polystyrene foam sheets by extrusion of expandable beads
  - Polystyrene and polyethylene foam sheets by direct-injection tandem-extrusion of general-purpose polystyrene and low-density polyethylene
  - Cross-linked polyethylene foam sheets by a chemical cross-linking and foaming process
- Structural foam products
  - Polystyrene foam parts by a low-pressure structural foam molding process
  - Polystyrene, polyvinyl chloride, and polypropylene foam profiles by an extrusion process
- Thermoformed foam products
  - Polystyrene foam hamburger packs
  - Cross-linked polyethylene foam parts.

The report also reviews blowing agents, syntactic foams, and the various processes for producing thermoplastic foam parts.

Report No. 97A

# **FOAMED PLASTICS**

**SUPPLEMENT A**

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**January 1984**

A private report by the  
**PROCESS ECONOMICS PROGRAM**

Menlo Park, California 94025

For detailed marketing data and information, the reader is referred to one of the SRI programs specializing in marketing research. The CHEMICAL ECONOMICS HANDBOOK Program covers most major chemicals and chemical products produced in the United States and the WORLD PETROCHEMICALS Program covers major hydrocarbons and their derivatives on a worldwide basis. In addition, the SRI DIRECTORY OF CHEMICAL PRODUCERS services provide detailed lists of chemical producers by company, product, and plant for the United States and Western Europe.

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