

■ Venting ■ Controlled Release ■ Filtering ■ Diffusing ■ Membrane Support

A microscopic image showing a dense network of interconnected, porous plastic structures. The structures appear as rounded, interconnected nodes with a textured, almost crystalline surface. The colors are primarily blue and green, with some yellow highlights, suggesting a complex internal structure and possibly some biological or chemical interaction.

POROUS PLASTICS DIVISION

M.A. Industries - Quality Products Through Creative

Research. In business for over 30 Years, M.A. is a Multi-faceted,
Multi-million Dollar International Company.

SUPPLYING POROUS MATERIALS FOR OVER 15 YEARS

M . A . INDUSTRIES INC.





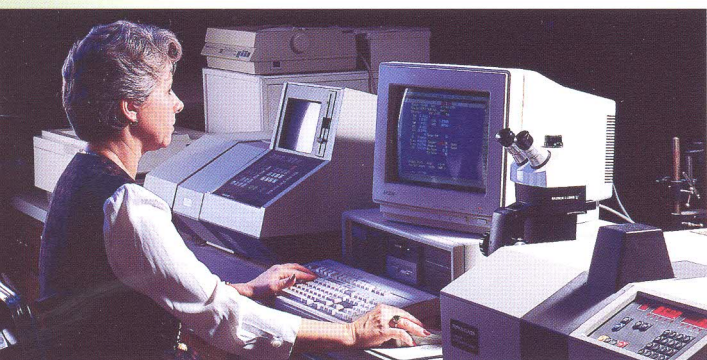
M.A. INDUSTRIES'

Porous Plastics Division is dedicated to supplying our customers with the best Service, Quality and Value possible. Our products are engineered from various polymers with controlled pore sizes for venting, filtering, diffusing, control release, membrane support and other applications requiring a porous substrate.

SERVICE - Our Service starts with a toll free number that connects you to a "Human" Voice! When you need to talk to someone you get a person, not a recording. Our Customer Service Department is dedicated to providing total customer satisfaction.

QUALITY - Using GMP's and ISO 9000 guidelines, M.A.'s Quality Management System is dedicated to supplying consistent, superior quality. M.A. provides comprehensive testing and analysis and full production control on all products.

VALUE - M.A.'s Sales and Engineering professionals work closely with customers from concept to finished product. Our in-house tooling department allows for tooling lead times of typically 2 - 3 weeks.



POROUS PLASTICS

WHAT IS POROUS PLASTIC?

Porous plastic products are manufactured from thermoplastic polymers, primarily High-Density Polyethylene (HDPE), Ultra-High Molecular Weight Polyethylene (UHMW), Polypropylene (PP) and combinations of the above. The porous product has an intricate network of open-celled omnidirectional pores. Controlled particle size distribution produces a wide range of interconnected cell structures and specific pore size ranges.

TYPICAL APPLICATIONS

Filtration - Unlike the direct passages in woven synthetic material and metal screens, the pores in porous plastics join to form many tortuous paths enabling porous plastics to have a dual filtering capability. The porous plastic component acts as a surface filter by trapping particles larger than the average pore size, while much smaller particulate matter is trapped deep in the complex channels forming a depth filter effect.

Venting - The naturally hydrophobic nature of Polyethylene and Polypropylene allows gas to escape while blocking the flow of liquid. If pressure is applied to the liquid against the porous part, a complete liquid barrier can be obtained by using a unique material which allows venting until the porous plastic part comes in contact with an aqueous solution. When a liquid, such as water or blood, comes in contact with the material, it seals off the flow completely.

M . A . I

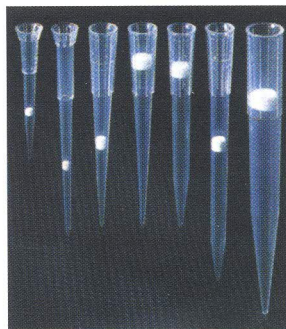


PRODUCT APPLICATIONS

Diffusing - The omnidirectional, inter-connecting pores allow for diffusing of gases into aqueous solutions.

Controlled Release - The ability to control the void volume allows for controlled release of solutions.

Membrane Support - The smooth surface and high void volume of porous plastic is an excellent support median.



Arterial Syringe Vents
Applicators
Aeration
Battery Vents
Catheter Vents
Chromatography Support
Oxygen Diffusers
Flow Control Devices
Controlled Release Reservoirs
Water Filtration
Pipette Tip Filters
Prefilters
Lubrication Reservoirs
Membrane Support

M . A . I N D U S T R I E S I N C .



Molding plastic materials with controlled pore sizes to create a porous component for venting, filtering, diffusing and controlled release applications is just one of the product lines spawned from M.A.'s creative and innovative history.

Since 1969, M.A. Industries has been setting industry standards with precision engineered products. Today, M.A. is a multi-faceted, multi-million dollar international company.

With the inception of the first ever steel reinforced plastic manhole step, M.A. Industries Molding Division has continued to lead the way in the manufacture of plastic accessories for the concrete industry as well as custom injection molded products.

M.A. Industries has a track record in the area of plastic reclamation and recycling that no one else in the world has surpassed. M.A.'s Battery Breaker was the first system of its kind to separate materials in the battery recycling process. A few years later, M.A. took recycling technology one step further with the development of a post consumer, commingled plastic bottle recycling system.

The development of the Porous Plastic Division began with flame arrestors for use in the lead acid battery industry. With the molding of polypropylene, with controlled pore sizes for venting gas and not allowing a spark or flame back into the battery causing an explosion, the porous plastics division was begun. Now, many years later, porous polypropylene and polyethylene are molded for the

medical industry and the consumer industry, in addition to the industrial industry.

M.A. Industries Tape and Reel Systems Division is a recognized manufacturer of quality U.S. made repulpable turn-up tapes, paper band strapping, and reel turn-up systems for both at home and abroad paper mills.

Serving Our Customer's Needs for Over Thirty Years!

Our Laboratories have been a key factor in M.A.'s emergence as a leader in plastic molding, recycling, repulpable turn-up tape, paper band strapping, reel systems and other specialized equipment. Through this state of the art, in house facility, M.A. conducts comprehensive testing analysis and production controls on all M.A. products and services.

M.A. Industries Porous Plastics Division, Molding Division and Strapping Division in Peachtree City, Georgia.



P.O. Box 2322, 303 Dividend Drive ■ Peachtree City, Georgia 30269 ■ Corporate Phone: (770) 487-7761
Toll Free: 1-800-241-8250 ■ Fax: (770) 631-4679 ■ Email: ma@main.com ■ www.maind.com