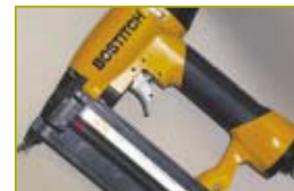


#### ABOUT POLYONE DISTRIBUTION

*PolyOne Distribution, a leading supplier of plastic resins from more than a dozen major chemical companies, offers a wide selection of polymers and technical services, and takes customer service to a higher level by offering assistance with materials selection, technical development, quality control, product storage, and other services.*



#### ABOUT POLYONE CORPORATION

*The Cleveland, Ohio-based PolyOne Corporation, a leading international polymer services company with annual revenues approaching \$3-billion, operates customer service centers worldwide, providing customers with a single source for polymer, elastomer, colorant, and additive products.*

#### THE INNOVATOR IN ENGINEERING THERMOPLASTICS DISTRIBUTION ALSO PROVIDES THE BROADEST PRODUCT OFFERING

Customers are now demanding total product / technology solutions from their suppliers. PolyOne Corporation offers you this via the most diverse portfolio of polymeric materials on the market and by being the world's most unbiased plastics supplier.

PolyOne Distribution is a leading thermoplastics distributor in North America because we offer the broadest range of quality resins from leading North American chemical companies and smaller suppliers from around the world. We stock more than 3,000 individual thermoplastic grades, and can store purchased materials for you so you can make better use of all your factory floor space. Our team's focus is to help you maximize your profitability and offer customized solutions that meet the specific design, cost, and performance criteria of your application.

#### UNMATCHED FIELD TECHNICAL SERVICE

Our field Technical Development Engineers (TDEs) have an average of 20-years' experience in plastics processing and are stationed in the field, throughout North America, to help customers with:

- ◆ Application Development,
- ◆ Blueprint Review,
- ◆ Cycle-Time Reduction,
- ◆ Extrusion,
- ◆ Part-Design Assistance,
- ◆ Plant Audit & Layout,
- ◆ Productivity Programs,
- ◆ Seminar / Training Programs, and
- ◆ Troubleshooting / Process Assistance

#### [www.PolyOneDirect.com](http://www.PolyOneDirect.com)

Designed specifically for registered PolyOne Distribution customers, [www.PolyOneDirect.com](http://www.PolyOneDirect.com) allows you to order a full range of quality resins from more than a dozen leading chemical companies online directly by offering:

- ◆ 24 / 7 / 365 Real-Time Availability;
- ◆ Immediate Order Confirmation;
- ◆ Viewing of Order Status;
- ◆ Viewing of Invoice & Accounting Status; and
- ◆ Links to PolyOne Product Literature.



#### CONTACT US!

#### DESIGN CENTER

970 Peachtree Industrial Boulevard  
Suite 204  
Suwanee, GA 30024, USA

- ◆ U.S. & Canada: +1.800.337.2687
- ◆ Mexico: +1.678.546.6834

#### TECHNICAL HOTLINE

- ◆ U.S. & Canada: +1.866.POLYTCH  
(+1.866.765.9824)
- ◆ Mexico: +1.877.473.8325

#### POLYONE DISTRIBUTION HEADQUARTERS

990 E. 107th St.  
Lemont, IL 60439, USA

- ◆ North America: +1.630.972.0505
- ◆ Website: [www.polyonedistribution.com](http://www.polyonedistribution.com)

#### POLYONE CORPORATION

- ◆ Website: [www.polyone.com](http://www.polyone.com)

\* Moldflow is a registered trademark of Moldflow Corporation and its subsidiaries worldwide.  
 \* ProEngineer is a registered trademark of Parametric Technology Corporation and its subsidiaries in the United States and in other countries.  
 \* ANSYS is a registered trademark of Swanson Analysis Systems, Inc.  
 \* SolidWorks is a registered trademark of SolidWorks Corporation.  
 \* Unigraphics is a registered trademark of Unigraphics Solutions Inc.

THE ENGINEERING

ADVANTAGE



DESIGN CENTER

BETTER MATERIALS, BETTER PARTS, BETTER SOLUTIONS

# THE ENGINEERING

# ADVANTAGE

## BETTER MATERIALS, BETTER PARTS, BETTER SOLUTIONS



"PolyOne has provided Norgren with outstanding service in recent design projects by supporting us with their professional expertise throughout the entire project. They've helped us select the best materials, improved our part designs using Moldflow® analysis, and optimized our injection molding processes," said Judy Browne, OEM Project Manager at the company.

### WHILE OTHER COMPANIES REDUCE CUSTOMER RESOURCES, POLYONE DISTRIBUTION IS EXPANDING THEM

In order to better serve customers, PolyOne Distribution has increased resources to provide you with the best service possible. We offer assistance with materials selection, provide the broadest range of high-quality thermoplastic materials, and have a state-of-the-art Design Center, with capabilities for complete product development and engineering of molded plastic parts.

### OUR DESIGN CENTER OFFERS CLEAR CUSTOMER BENEFITS FOR YOU

PolyOne's Design Center is staffed by engineers with decades of practical experience in plastics processing, design engineering, and product development. When combined with state-of-the-art computer-aided engineering (CAE) tools, our customers benefit from:

- ◆ Shorter Mold Development Time,
- ◆ Improved Part Quality & Performance,
- ◆ Faster Cycle Time,
- ◆ Less Scrap,
- ◆ Lower Quality Control (QC) Monitoring Requirements, and
- ◆ Reduced Tool-Sampling Time.

Our high-tech, customer-driven, applications-oriented Design Center provides you with 3-D computer-aided design assistance to help move your ideas from concept through commercialization. And we have established a network within the design community allowing us to tap into industrial design firms for product styling and prototyping. Other services offered at the Design Center include:

- ◆ Feasibility Studies,
- ◆ Technical Consultation / SLA Modeling,
- ◆ Design / Part / Tool Reviews,
- ◆ Materials Characterization / Testing,
- ◆ Process Development / Optimization,
- ◆ Materials Processing,
- ◆ Part & Tooling Design Assistance, and
- ◆ Technical Hotline.

THE BOTTOM LINE IS WE OPTIMIZE YOUR PART TO FIT YOUR REQUIREMENTS.



Martin Krauth, President of GMB Enterprises, Inc. said, "PolyOne's Design Center and Technical Support Group is a valuable asset to our custom injection molding company. PolyOne's ability to provide Moldflow® analysis and tooling design recommendations has saved us time and money in building molds and maximizing production efficiencies on our molding floor. Their Technical Support Group and Customer Service Operations have always been available to answer our questions, troubleshoot problems, and deliver quality resins when time is of the essence. Thank you PolyOne for your continued support!"



At K-C Ballard Medical Products, Alyssa Anne Shampton, Quality Technician, had this to say, "I have been working with one of your employees for the past three days. I want to tell you how helpful she has been in providing information to me. She has always been prompt and courteous in responding to my e-mails, and she has gathered the information I required in record time – faster than any of your competitors. Please let her know what a joy it was to work with her."

### THE BROADEST ENGINEERING & TECHNICAL SERVICE SUPPORT IN THE PLASTICS INDUSTRY

The PolyOne Distribution Design Center offers a full range of customer-support services – many of which have been eliminated by other suppliers. These services include Materials Selection, Part & Tooling Design Assistance, a Technical Hotline, and Laboratory Testing.

#### MATERIALS SELECTION SUPPORT

PolyOne Distribution's knowledgeable Technical Development Engineers (TDEs) assist processors and OEM designers across a wide range of markets with materials selection, using our online database to find the right product at the right price for each application. Additionally, we provide help with materials processing, application development, and tooling design.

To provide you with even more services, our Design Center is involved in helping with:

- ◆ Part & Tooling Design Assistance,
- ◆ Structure Analyses,
- ◆ Mold Filling / Warpage Analyses,
- ◆ Color / Special Effects,
- ◆ Tooling Design, and
- ◆ On-Site Processing Support.

#### PART & TOOLING DESIGN ASSISTANCE BY PLASTICS EXPERTS

At the Design Center, PolyOne Distribution's experienced engineers and specialists are available to help you design plastic parts using ProEngineer® 3-D solid-modeling CAD/CAE software. Additionally, ANSYS® finite-element analysis (FEA) tools are used to simulate thermal and mechanical part performance under a variety of conditions in the end-use environment.

Our engineers can also predict processing performance during and after injection molding using Moldflow® Fiber, Flow, Cooling, and Warpage software from Moldflow Corporation.

Moreover, PolyOne Distribution's Design Center can coordinate stereolithography (SLA) models through third-party manufacturers, for an additional cost.



#### TECHNICAL HOTLINE

Regardless of the size of the project, PolyOne Distribution offers you full assistance with our Technical Services & Support Team, whose members are on hand to assist through the entire plastics manufacturing process. Our toll-free Technical Hotline provides you with one place to go for all your thermoplastic technical needs including:

- ◆ Troubleshooting Assistance,
- ◆ Technical Data Sheets,
- ◆ Alternate Grades Selection,
- ◆ Materials Selection Assistance,
- ◆ Automotive Specifications,
- ◆ FDA / USP / NSF Approvals,
- ◆ Material Safety Data Sheets (MSDS), and
- ◆ Processing Information



#### FEE SCHEDULE

Contact the PolyOne Distribution Design Center for current pricing +1.800.DES.CNTR. In Mexico, call +1.678.546.6867. For further information, please contact your sales representative or Technical Development Engineer.

To access our Technical Hotline, call +1.866.POLYTCH (+1.866.765.9824) in the U.S. or Canada. In Mexico, please call +1.678.546.6834.

#### LABORATORY TESTING FROM AN INDUSTRY LEADER

To help ensure your final part is of the highest quality, customers of the PolyOne Design Center can access outstanding laboratory testing capabilities, provided by Polymer Diagnostics Inc. (PDI), another operating unit of PolyOne Corporation. PDI works with a company's technical team to understand and define the issues, and offer solutions to problems. PDI can also provide rapid, accurate, and cost-effective standardized test results... all to help you keep your product on target for success. PDI's full range of laboratory capabilities include:

- ◆ Polymer Identification,
- ◆ Engineering Thermoplastics & Vinyl Technology,
- ◆ Thermal Analyses,
- ◆ Materials Qualification,
- ◆ New Product Design
- ◆ Fire Science,
- ◆ Mechanical & Physical Properties Testing,
- ◆ Chemical Analyses & Microscopy, and
- ◆ Failure Diagnosis & Troubleshooting

#### FILE TRANSFER CAPABILITIES

Files can be sent to the Design Center via e-mail or transferred by FTP. The Design Center can access your FTP site or you can access our FTP site. Call +1.800.337.2687 in the U.S. and Canada, and in Mexico call +1.678.546.6867, for information and a password. The preferred file formats are listed below in descending order:

- ◆ ProEngineer®,
- ◆ SolidWorks®,
- ◆ Unigraphics® native file,
- ◆ STL,
- ◆ STEP,
- ◆ IGES,
- ◆ DXF, and
- ◆ Blueprints.

