



With **same-day cutting & shipping** and complete fabrication to print services, Alro Plastics stands committed to continuous improvement, quality materials, competitive prices, on-time deliveries, advanced computer technology and personal service.

# **PLASTICS**

Product Line	
PLASTICS PROCESSING Processing capabilities	
& Equipment information	0-5
MATERIAL SELECTION GUIDE	
General Selection Criteria	
Brief Product Descriptions20-9 thru 20	-13
FIBERGLASS PRODUCTS	
Custom Fiberglass Grids & Grating20	-14

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# Alro Plastics Sheet • Rod • Tube • Film • Profiles • Machined Parts

### ISO 9001:2008 Certified

### Have Questions? Contact Alro Plastics Toll Free: (800) 877-2576 e-mail: plastics@alro.com

Please refer to page 20-5 for additional contact information and the location that services your area.

### PRODUCTS

ABS ACETAL ACETRON® GP ACRYLIC ANTI-MICROBIAL BORATED PE CAST NYLON **CELAZOLE®** CLEAR PVC **COLORCORE® COMPOSOLITE®** CPVC CUTTING BOARD **DELRIN®** DELRIN<sup>®</sup> AF **DENSETEC® DURADEK® DURAGRATE® DURAGRID® DURASHIELD® DURATREAD® DURATRON® FRTALYTF®** EXTREN® **EXTRUSIONS FABBACK®** FGI-AM<sup>™</sup> GRATING FIBERGLASS FII MS FLUOROPLASTICS **FLUOROSINT®** G10 / FR-4 GPO-3 HDPE

HYDEX® 202/301 HYDEX® 4101/4101L HYDLAR® Z HY-PACT® VH IND. LAMINATES **KETRON® PEEK** KING STARBOARD® KOMA ALU® **KOMATEX® KYDEX<sup>®</sup> KYNAR® PVDF** LDPE LIFE SCIENCE GRADES LubX® C/CV **MAKROLON®** MC® 901/907 MEDICAL GRADES **MICARTA®** NORYL® PPO **NYLATRON® NYLOIL®** NYLON **OPTIX® PALSUN®** PBT PEEK PETG PHENOLIC **PLEXIGLAS®** POLYCARBONATE POLYETHYLENE POLYPENCO® NYLON 101 POLYPROPYLENE POLYSTONE® M

POLYSULFONE PPS PRECISION BOARD PROFILES PROPYLUX® HS PTFE / TFE PVC PVC FOAM SHEET **PVDF RADEL**<sup>®</sup> REPROCESSED UHMW RUBBER **SAFPLATE®** SAFRAIL™ SEMITRON<sup>®</sup> STARBOARD® **TECAFORM® TECHTRON® TIVAR® 1000** TIVAR® 88 **TIVAR® CLEANSTAT** TIVAR® DRYSLIDE TIVAR® H.O.T. TOOLING BOARD **TORLON®** UHMW-PE ULTEM® URETHANE **USDA GRATING** VHMW SHEET **VIVAK® WALLTUF® WEARGEHR® ZELUX®** 



### Alro Plastics Locations Servicing Warehouse & Contact Information

### (Color shades indicate branch coverage)



### Jackson, MI (Headquarters)

2218 Enterprise • Jackson, MI 49204-0927 (800) 877-2576 • Ph: (517) 787-5500 • Fx: (517) 787-6380

### Detroit, MI

34401 Schoolcraft Road. • Livonia, MI 48150 (800) 877-2576 • Fx: (517) 787-6380

### Grand Rapids, MI

4150 Broadmoor SE • Grand Rapids, MI 49512 (888) 877-2576 • Ph: (616) 656-2820 • Fx: (616) 656-2828

### Louisville, KY

5620 Shepherdsville Road • Louisville, KY 40228 (877) 968-9980 • Ph: (502) 968-9980 • Fx: (502) 968-5530

### **Clearwater, FL**

10585 47th Street N. • Clearwater, FL 33762 Ph: (727) 573-1480 • Fx: (727) 573-1632

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## **Alro Plastics Processing Capabilities**

For customers with processing and fabrication requirements, Alro Plastics is capable of supplying finished parts per your specific requirements.

Our modern manufacturing methods and state-of-the-art computer systems virtually eliminate mistakes and reruns. By utilizing computer planning and control systems, we offer faster, more efficient manufacturing. The end result allows Alro Plastics to maintain the lowest lead times in the industry.

Regardless of your requirements, simply provide Alro with the specifications for your projects and let us handle the rest.

#### Processing Services

- CNC Saw Cutting
  Waterjet Cutting
- Bending & Gluing
- Plastic Welding
- CNC Routing
- CNC Milling
- Drilling & Tapping
- Screw Machine Parts
- Boring

Turning

### CNC Saw Cutting

With a multitude of CNC Production SawsAlro Plastics is able to offer same day cutting and shipping on the majority of cut-to-size orders. These high precision saws are capable of cutting sheets up to 7" thick quickly and accurarely. The large 14 ft x 14 ft tables are able to handle very large sheets allowing for better material yields.

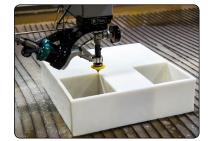
### Rod & Tube Saw Cutting

Alro Plastic stocks rod and tube up to 12" diameter in a variety of materials and also has the ability to cut it to desired length. Our horizontal band saws can cut round stock up to 18" in diameter. These saws are easy to set up for quick 1 piece cut jobs and can also be programmed for longer production jobs.

#### 5-Axis Waterjet Cutting

Another value-added service Alro offers is 5-Axis Waterjet Cutting capable of cutting sheet stock as thick as 10" in a single pass. The 5-axis rotation allows the machine to cut bevels and 3-dimensional parts.

The Waterjet is also ideal for cutting the more challening materials such as rubber, urethane, foam, fiberglass and the many glass-filled plastic materials. These materials can be trouble for conventional cutting methods, but the Waterjet is able to cut them easily while holding tight tolerances.





### **Alro Plastics Processing Capabilities**

### CNC Routing, Drilling, & Milling

Alro Plastics features computerized, three-axis CNC Routers with additional vertical and horizontal drilling capabilities. With this equipment, extremely close tolerances for milled, drilled and routed parts up to 120" x 144" x 4" thick can be achieved.

These production style routers have dual tables to allow them to run parts on one while loading and unloading the other table to increase productivity. The dual and quad heads allow for running two and four parts at the same time for maximum efficiency while the auto toolchangers hold up to 16 indexable tools each to decrease downtime.

These highly efficient CNC machines running multiple shifts allow Alro to produce high quality parts at competitive prices in a short amount of time.

#### **CNC Vertical Machining Center**

In addition to the CNC routers Alro Plastics also has a vertical machining center for more complex parts and prototype runs. The VMC has the ability to cut parts from 1/16" thick up to 6" thick with a 32" wide x 60" long work surface for large parts. With its 4-axis capabilities and automatic tool changers the VMC is an excellent compliment to the CNC routers.

#### **Plastic Welding**

One of the more unique value-added services Alro offers is plastic welding. Alro Plastics offers both modified extrusion welding as well as hot gas welding that is all done in house by experienced welders.

Plastic welding can be as simple as welding two sheets togther to make one long sheet or routing out complex shapes to assemble custom fabricated tanks.

#### Additional Equipment and Capabilities

- Horizontal Band Saws
- Vertical Band Saw
- Chop Saws
- Slant Arbor Table Saw
- Radial Arm Saw
- Vertical Knee Mill
- Manual Engine Lathe
- Multiple Drill Presses
- Tapping Machine
- Shaper, Planers & Jointers
- Acrylic Fab & Assembly
- · 4 ft & 8 ft Heat Benders
- 4 foot Press Brake
- · Faro CMM Articulating Arm

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### **Advantages of Stock Shape Plastics**

Plastics can provide many advantages over other materials. Some benefits include:

Light Weight High Wear Resistance High Impact Resistance Noise Reduction Self Lubricating Easily Machined Corrosion Resistance Aesthetics



Increased Productivity Longer Part Life Increased Product Reliability OSHA Compliance No Lubrication Required Cost Savings Less Down Time Appearance

### Material Selection Guide General Selection Criteria

The selection of a material for an application is a very difficult task. Usually one is only able to narrow the selection down to two or three candidates and the final selection is then determined by testing.

The first and most important step in selecting a material from the broad spectrum (steel, aluminum, brass, UHMW, Delrin, nylon, etc.) is to carefully define the requirements of the application and the physical properties required and the environment in which the material will need to perform.

It may be necessary to ask some or all of the following questions to define the application. The more completely the application is defined, the better the chance of selecting the best material for the job.

#### What load will the part have to carry?

- Will the design carry high loads?
- · What will the highest load be?
- · What is the maximum stress in the part?
- What kind of stress is it (tensile, flexural, etc.)?
- · How long will the load be applied?
- · What is the projected life of the part or design?

#### What temperatures will the part see and for how long?

- What is the maximum temperature the material must sustain?
- What is the minimum temperature the material will sustain?
- · How long will the material be at these temperatures?
- Will the material have to withstand impact at the low temperature?

### Material Selection Guide General Selection Criteria

#### Will the material be exposed to chemicals or moisture?

- Will the material be exposed to normal relative humidity? Will the material be submerged in water? If so, at what temperature?
- · Will the material be exposed to steam?
- · Will the material be painted?

• Will the material be submerged or wiped with solvents or other chemicals? If so, which ones?

• Will the material be exposed to chemical or solvent vapors? If so, which ones?

• Will the material be exposed to other materials that can outgas or leach detrimental materials, such as plasticizers?

#### Will the material be used as a bearing?

#### Will it need to resist wear?

• Will the material be expected to perform as a bearing? If so, what will the load, shaft diameter, shaft material, shaft finish, and rpm be?

· What wear or abrasion condition will the material see?

**Note:** Materials with friction reducers added, such as TFE, molybdenum disulfide, or graphite, generally exhibit less wear in rubbing applications?

#### Does the part have to retain its dimensional shape?

· What kind of dimensional stability is required?

#### Will the part have to meet any regulatory requirements?

· Is an FDA approved material required (taste/odor)?

#### Should the material have a special color and/or appearance?

- · What color material is desired?
- · Does it have to match anything else?
- Is a textured surface needed? Will the part be used outdoors?

#### Will the part be used outdoors?

#### Is material cost an important factor?

### Material Selection Guide General Selection Criteria

LEAST EXPENSIVE











MOST EXPENSIVE

\*COMPARATIVE PRICING BASED ON PRICE PER SQUARE FOOT FOR 1" THICK SLAB **Clear Acrylic Sheet** Vivak<sup>®</sup> (Clear PETG Sheet) Clear PVC Sheet Makrolon<sup>®</sup> (Clear Polycarbonate Sheet) Polypropylene HDPE PVC Type I ColorCore<sup>®</sup> StarBoard® TIVAR<sup>®</sup> 1000 (UHMW-PE) TIVAR® 88 TIVAR® H.O.T. Phenolic C MC® 907 Nylon (Cast Type 6) Nylon 101 (Extruded) Nyloil<sup>®</sup> FG & MDX MC<sup>®</sup> 901 ABS Natural FDA Compliant Nvlatron<sup>®</sup> GS/GSM Urethane Acetron® GP Norvl<sup>®</sup> Delrin® Nylatron® NSM Ertalyte® (PET) Polycarbonate (Machine Grade) WearGEHR® Acetal FG PTFE (Virgin) Delrin® Glass Filled Polysulfone Ultem® (Polyetherimide) Kynar® PVDF Delrin<sup>®</sup> AF Radel® Fluorosint<sup>®</sup> Techtron® Ketron® (PEEK) Torlon<sup>®</sup> (Polyamide/imide) Duratron<sup>®</sup> Celazole®



Visit the Alro Plastics Web Site at alroplastics.com



CLEAR ACRYLIC SHEET: Acrylic plastic sheet is completely transparent, flexible

and has great resistance to breakage. It is an excellent material which can replace glass for windows, doors, partitions and skylights. It is lightweight, with only half the weight of glass, and it is virtually unaffected by nature. Acrylic sheet is supplied in general purpose grades and in many special grades formulated to meet specific physical requirements. Not FDA compliant.

VIVAK<sup>®</sup>: PETG sheet is a transparent copolyester sheet product that offers a unique balance of physical properties and ease of fabrication. It is ideally suited for complex parts requiring fabrication, including deep thermoforming draws and precise molded-in details. In addition, Vivak<sup>®</sup> sheet is produced using resin that complies with FDA regulations for food contact applications.



UHMW-PE is well suited for applications where durability and low friction are of paramount importance.

**CLEAR PVC SHEET:** Clear Rigid PVC is versatile, high clarity, transparent PVC sheeting that can easily be embossed, thermoformed, and printed. Clear Rigid PVC is highly resistant to chemicals, corrosion, and impact. Not FDA compliant.

**MAKROLON®** (Clear Polycarbonate Sheet): Makrolon® is a high-quality polycarbonate sheet produced by Bayer Material Science LLC. Forming and fabrication characteristics and techniques are comparable to those of other commercial polycarbonate sheet products. Makrolon® sheet is 300-times stronger than single-strength glass, and significantly tougher than other transparent sheet materials of equal thickness.

**POLYPROPYLENE:** Polypropylene is an economical material that offers a combination of outstanding physical, chemical, mechanical, thermal and electrical properties not found in any other thermoplastic.

Polypropylene is a high corrosion resistant material that has high temperature and tensile strength and possesses excellent resistance to organic solvents and degreasing agents as well as electrolytic attack. FDA compliant.

**HDPE:** A high impact strength and high density polyethylene. HDPE has excellent tensile strength, energy absorption, abrasion resistance, and resistance to stress cracks. FDA compliant.

**PVC TYPE I:** A normal impact, corrosion-resistant material offering an excellent chemical resistance. It is highly recommended for applications where acid and alkalies are in high concentration, normal working temperatures are relatively low, 140°F or below, and the application environment is not subject to excessive physical abuse. Not FDA compliant.

**COLORCORE®:** ColorCore® is a versatile, environmentally stabilized sheet with multiple layers of contrasting color. Its thin cap layers and bright primary colors make it ideal for signage, marine, playground and recreational applications. The sheets are easy to engrave and machine, as the cap is approximately ten percent of nominal thickness for high production speeds.

**STARBOARD®:** StarBoard® is the original marine-grade polymer and the industry standard. It is environmentally stabilized to withstand the harshest marine conditions. It will not rot or discolor like teak and other solid woods, and it will not delaminate like wood laminates. StarBoard has a handsome matte finish on both sides to hide scuffs and scratches that would show on glossy textured sheets or acrylics.

**TIVAR® 1000 (UHMW-PE):** Provides outstanding abrasion resistance and a low coefficient of friction. Impact strength is high and chemical resistance is excellent. UHMW-PE also exhibits a high coefficient of thermal expansion (meaning that the material will expand or swell under increased temperatures). This product is also FDA, USDA, 3A Dairy compliant, however; it will not handle heavy loads or hold tight tolerances.

TIVAR® 88: Uniquely formulated UHMW, TIVAR® 88 engineering polymer has a very low coefficient of friction, excellent abrasion resistance. Lightweight (1/8

the weight of steel), it is easily machined and installed. Available in an anti-static formulation. Not FDA compliant.

#### TIVAR® H.O.T.

Formulated to maintain key performance properties in an extended temperature range, TIVAR<sup>®</sup> H.O.T. will excel in a variety of industrial manufacturing environments where temperatures range up to 275°F (nearly 100°F higher than competing UHMW-PE formulations). *FDA compliant*.

**PHENOLIC C:** Tough and strong, Phenolic C provides high impact strength. This material is easily machined and is outstanding for a wide variety of mechanical applications. Fair electrical properties. Not FDA compliant.

#### MC<sup>®</sup> 907 NYLON (Cast, Type 6):

This nylon exhibits all the properties which generally make Nylon a superior



In direct comparison to other commonly used plastics, HYDEX 4101 and HYDEX 4101L have: improved wear and chemical resistance versusAcetal, superior dimensional stability over Nylon, and the best wear and lubricity when compared to PET-P.

engineering material; high strength, low friction and wear resistance, however, because of the casting process, part size and thickness are almost unlimited without degradation of the material's internal structure. MC<sup>®</sup> 907 natural (off white color) is FDA, USDA, & 3A-Dairy compliant.

**NYLON 101 (Extruded):** Of all the unmodified nylons, Nylon 101 is the strongest, most rigid and has one of the highest melting points. It is commonly specified for screw machined electrical insulators and food contact parts. Nylon 101 natural is FDA, USDA, NSF, & 3A-Dairy compliant.

**NYLOIL® FG & MDX:** Cast Nylon 6 with built-in oil lubrication gives this material a lubricated surface at all times. In addition to excellent lubricity, other characteristics include excellent wear resistance, improved dimensional stability and machinability. Grade FG is FDA compliant.

**MC<sup>®</sup> 901:** MC<sup>®</sup> 901 Nylon is a heat stabilized nylon offering long-term thermal stability to 260°F. It is blue in color and used in a variety of bearing and structural applications such as wheels, gears, and custom parts. Not FDA compliant.

**ABS NATURAL FDA COMPLIANT:** ABS is a low cost engineering plastic that is easy to machine and fabricate. ABS is an ideal material for structural applications when impact resistance, strength, and stiffness are required. It is widely used for machining pre-production prototypes since it has excellent dimensional stability and is easy to paint and glue. Natural (beige) and black ABS are available in FDA compliant grades.

**NYLATRON® GS/GSM:** Nylatron® GS Nylon is a nylon and molybdenum disulphide (MoS2) composition designed to improve the mechanical, thermal, and bearing properties of type 6/6 nylon, while maintaining its basic electrical and chemical characteristics. Nylatron® GS offers greater wear resistance, lower surface friction, higher strength, and greater rigidity than unfilled 6/6 with improved dimensional stability. Not FDA compliant.

**URETHANE:** Polyurethane or "urethane" is an elastomeric material with outstanding properties and wear characteristics. Superior cut and abrasion resistance. Not FDA compliant.

**ACETRON® GP:** Acetron® GP is a general purpose copolymer acetal and is the only porosity-free acetal product available today. The manufacturer's in-line photometric quality procedure assumes every plate and rod is porosity-free as measured by a dye penetrant test-making it the preferred acetal for food contact and medical applications. Acetron® GP natural is FDA, USDA, NSF, Canada AG & 3A-Dairy compliant.

**NORYL®:** A PPO (Polyphenylene Oxide) and styrene alloy, Noryl's hydrolytic stability makes it a good choice for many applications where fluids are present. Noryl® is available in a FDA compliant grade that makes it suitable in food-based applications.

**DELRIN®:** The stiffest and highest design strength unreinforced plastic. Delrin® has an excellent combination of physical properties that make it suitable for numerous applications. It has a hard scratch resistant surface, low friction, excellent resistance to hydrocarbons and high fatigue endurance. This material machines like brass and is dimensionally stable and offers excellent resistance to moisture. Alro Plastics offers these standard grades of Delrin®: 150SA and 550SA. The key properties are as follows:

- 550SA The best machinability of all grades, however, less impact strength
- 150SA Improved impact strength over 550SA

These materials are FDA & USDA compliant.

**NYLATRON® NSM:** Nylatron® NSM is the premium bearing and wear nylon product available today. Solid lubricant additives impart self-lubricating, high pressure/velocity and superior wear resistance characteristics. This wear resistance is delivered without either start-up or running lubrication, making it ideal for bearings, gears, and wear pads. Nylatron® NSM was developed specifically for demanding applications where larger size parts are required. Not FDA compliant.

**ERTALYTE®** (**PET-P**): Ertalyte® is an unreinforced, semi-crystalline thermoplastic polyester based on polyethylene terephthalate (PET-P). It is characterized as having the best dimensional stability coupled with excellent wear resistance, low coefficient of friction, high strength, and resistance to moderately acidic solutions. Ertalyte's properties make it especially suitable for the manufacture of precision mechanical parts which are capable of sustaining high loads and enduring wear conditions. FDA compliant.

**POLYCARBONATE (Machine Grade):** A transparent thermoplastic with high impact strength, high modulus of elasticity and good high voltage insulating properties. Some practical limitations of polycarbonate sheet include exposure to high temperatures and humidity over long periods of time. This material is not FDA compliant. ZELUX<sup>®</sup> polycarbonate is available in an optically clear grade and large sheet sizes.

**WEARGEHR®:** Acetal FG is a wear resistant grade of GEHR Acetal copolymer. It contains a solid filler for enhanced impact, friction and wear properties. WearGEHR® Acetal FG (Food Grade) is also FDA compliant and does not contain any PTFE in it. This material is an alternative to the well know Delrin® AF material, with additional FDA compliance.

**PTFE (Virgin):** Or TFE - polytetrafluoroethylene is a very dense material having a density of 2.13 - 2.19 grams/cc. TFE is well known for its chemical resistance. It is insoluble in all organics with the exception of a few exotics. PTFE has heat resistance to 550°F and is FDA compliant.

**ERTALYTE**<sup>®</sup> (**PET**) **TX**: Ertalyte<sup>®</sup> TX is an internally lubricated thermoplastic polyester providing enhanced wear and inertness over general purpose nylon (PA) and acetal (POM) products. Containing uniformly dispersed solid lubricant, Ertalyte<sup>®</sup> TX provides a lower wear rate and coefficient of friction than unmodified polyesters like PET or PBT and even internally lubricated materials like Delrin<sup>®</sup> AF blend. FDA compliant.

**DELRIN**<sup>®</sup> **GF**: Stock shapes exhibit the basic Delrin<sup>®</sup> properties plus high strength. Overall mechanical properties and dimensional stability are enhanced in this tough material. Specific property advantages include increased stiffness, better creep resistance and a higher dimensional stability. Parts designed using glass-filled will exhibit high fatigue endurance, low deformation under load and good impact resistance. Caution: glass-filled materials can be abrasive to the mating surface. Not FDA compliant.

**POLYSULFONE:** A semi-transparent, heat resistant, ultra-stable high performance engineering thermoplastic. This material offers excellent mechanical, electrical and chemical resistance properties which remain unchanged over a broad temperature range. It is FDA compliant and has excellent electrical properties and can withstand multiple autoclave cycles.

**ULTEM®** (**Polyetherimide**): Ultem® is an amorphous thermoplastic polyetherimide (PEI) material which combines exceptional mechanical, thermal, and electrical properties. Its continuous use temperature of 332°F is higher than that of commodity plastics such as Nylon and Delrin®. It is used widely in the electronic market because of its good arc resistance and dielectric constant. It is also a prime material for medical applications because of its ability to withstand multiple autoclave steam sterilization. FDA compliant.

**KYNAR® PVDF (Polyvinylidene Flouride):** This high molecular weight polymer is a member of the fluorocarbon family. PVDF provides greater strength, wear and creep resistance than PTFE. PVDF will not handle the high temperatures of PTFE, however; this material will operate in the -100°C to 150°C range. FDA compliant.

**DELRIN®** AF: A combination of oriented PTFE fluorocarbon fibers uniformly dispersed in Delrin® acetal resin. This combination produces a material that has strength, toughness, dimensional stability and fabrication economy which approaches that of Delrin®, plus the surface characteristics of unlubricated PTFE. Not FDA compliant.

**RADEL®:** Stock shapes extruded from Radel® R resins offer a superior combination of high performance properties that include excellent thermal stability, outstanding toughness, and good environmental stress cracking resistance. These properties make Radel® R stock shapes attractive for a variety of demanding applications. Not FDA compliant.

**FLUOROSINT**<sup>®</sup>: Fluorosint's unique properties are the result of a proprietary process in which synthetically manufactured mica is chemically linked to PTFE. This bonding results in properties not normally attainable in reinforced PTFE. Fluorosint<sup>®</sup> grades offer an excellent combination of low frictional properties and dimensional stability. Available in FDA grade.

**TECHTRON**<sup>®</sup>: PPS (polyphenylene sulfide) products offer the broadest resistance to chemicals of any advanced engineering plastic. They have no known solvents below 392°F (200°C) and offer inertness to steam, strong bases, fuels and acids. Not FDA compliant.

**KETRON®** (**PEEK**): Ketron® PEEK grades offer chemical and hydrolysis resistance similar to PPS but can operate at higher temperatures. Unreinforced, extruded Ketron® PEEK offers good wear resistance and can be used continuously to 480°F (250°C). It can also be used in hot water or steam without permanent loss in physical properties. FDA Compliant.

**TORLON® Poly(amide/imide):** This resin exhibits exceptional physical and chemical properties with superior resistance to elevated temperatures (from 400°F to 500°F continuously). It is available in 3 grades: electrical, bearing and 30% glass reinforced. This material is not FDA compliant.

**DURATRON®:** Duratron® is a fully imidized thermoset polyimide. Full imidization and encapsulation of graphite lubricants in wear grades make Duratron® PI stronger than other polyimides and provide excellent wear characteristics. Duratron® PI is synthesized differently than competitive polyimides resulting in: Improved chemical resistance, lower coefficient of thermal expansion and significantly better physical properties.

**CELAZOLE®:** Celazole® PBI is the highest performance engineering plastic available today. It offers the highest heat resistance and mechanical property retention over 400°F (205°C) of any unfilled plastic and has better wear resistance and load carrying capabilities at extreme temperatures than any other reinforced or unreinforced engineering plastic. Not FDA compliant.



For more in-depth information on our wide range of plastic materials please visit alroplastics.com

### Fiberglass Products Custom Fiberglass Grating & Shapes

Alro Plastics is a distributor of Fiberglass Products produced by Strongwell including:

- Extren®
- Duradek<sup>®</sup>
- Duragrid<sup>®</sup>
- Duragrate<sup>®</sup>
- Durashield®
- Safrail<sup>™</sup>
- Safrail<sup>®</sup>
- Composolite<sup>®</sup>
- Safplate<sup>®</sup>
- Fibrebolt<sup>®</sup>



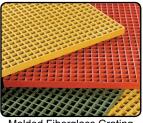
To learn more about our products, services and instructions on how to order Fiberglass Products follow the steps below.

- 1. alro.com
- 2. click plastics
- 3. click literature
- 4. click fiberglass products

Or call Alro Plastics 1-800-877-2576



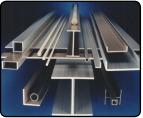
Fiberglass Ladders & Handrails



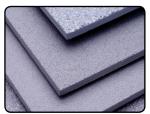
Molded Fiberglass Grating



Pultruded Fiberglass Grating



Fiberglass Structural Shapes



Fiberglass Gritted Plate

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