WARNING: These products can potentially expose you to chemicals including, 4-Dioxane, Acetaldehyde, Acrylonitrile, Bisphenol-A, Carbon Black, Chromium, Cumene, Dichloromethane, Ethyl Acrylate, Ethylbenzene, Ethylene Glycol, Formaldehyde, Glass Fibers, Hexachlorobenzene, Lead, Methanol, Nickel, Polyvinyl Chloride, Silica-crystalline, Styrene, Tetrafluoroethylene, Titanium Dioxide, and Toluene, which are known to the state of California to cause cancer and/or birth defects or other reproductive harm. For more information, visit www.P69Warnings.ca.gov
In 1987, the Alro Steel Corporation created the Plastics division to sell plastic sheet, rod, tube and film to Alro’s existing customer base. Alro customers can now purchase steel, plastics and industrial supplies from one fully integrated supplier and receive the same superior service while lowering their total procurement costs.

Alro Plastics is committed to providing the best overall value and service the industry has to offer. Our focus is on helping you to select the proper materials for your industrial applications, stocking the appropriate engineering materials, cutting and/or shipping the same day you place the order, and offering value added processing to meet your most demanding fabrication requirements.

Whether your business is large or small, we will provide you with competitive prices, technical support, and superior service. The Alro Steel Corporation has established an internal quality program guaranteeing continuous improvement in our people and systems. Alro is committed to being a primary supplier of plastics by assuring quality, service, support, and by listening to the needs of our customers.
Alro Plastics is an industry leader in supplying engineering plastic shapes and parts. We cut and/or ship the same day your order is placed and provide value added processing to meet the most demanding fabrication requirements.

### Plastic Products

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### Processing

- CNC Saw Cutting
- Rod & Tube Cutting
- Fiberglass Cutting
- Waterjet Cutting
- CNC Routing
- Plastic Welding
- 4-Axis Milling
- Machining
- Complete to Print
- Drilling & Tapping
- Helicoil Inserting
- Boring
- Turning
- Heat Bending
- Forming
- Gluing
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

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 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?

**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 or 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?
General Selection Criteria

Will the part have to meet any regulatory requirements?
Is an FDA approved material required (taste/odor)? Is this for a Medical application?

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?
Is material cost an important factor?

LEAST EXPENSIVE
HDPE (High Density Polyethylene)
Polypropylene
PVC Type 1 (PolyVinyl Chloride)
VHMW (Very High Molecular Weight Polyethylene)
LDPE (Low Density Polyethylene)
Acrylic (Clear sheet, Plexiglas®)
Polycarbonate (1/2" thick and under, Makrolon®)
UHMW-PE (Ultra High Molecular Wgt, TIVAR® 1000)
Phenolic CE (Industrial Laminate Sheet)
Nylon 6 (Cast), Nylatron® GSM (Cast)
ABS (Acrylonitrile-Butadiene-Styrene)
Acetal Copolymer (Acetron® GP)
Phenolic G10/FR4
TIVAR® 88 (Specialty UHMW product)
Delrin® (Acetal Homopolymer)
Nylon 6/6 (Extruded), Nylatron® GS (Extruded)
Urethane / Polyurethane
CPVC (Chlorinated PolyVinyl Chloride)
PTFE, Virgin (PolyTetra-FluoroEthylene)
Polycarbonate (Machine Grade, 3/4" thick and up)
Noryl® (PPO)
Nylatron® NSM (Cast, Premium Bearing grade)
Ertalyte® PET-P (Polyethylene Terephthalate)
Polycarbonate (Window Grade/optically clear)
Hydextm 202, 301, 4101, 4101L
Ertalyte® TX
Utem® 1000 (Duratron® PEI)
Polyethersulfone (PES)
PVDF (Kynar®)
Polysulfone
Delrin® AF (Acetal Homopolymer PTFE blend)
Hydlar® Z (Kevlar® fiber reinforced Nylon 6/6)
PEEK (Polyetheretherketone, Ketron®)
Techtron® PPS & HPV
Torlon® (Polyamide-imide, Duratron® PAI)
Tecasint™

MOST EXPENSIVE

*Note: Comparative pricing based on price per square foot for 1 inch thick slab.
Material Selection Guide

Product Descriptions

The following descriptions are designed to offer a brief reference of each product's typical properties. These descriptions have been arranged in order of least expensive to highest cost/performance. For additional information regarding product descriptions, applications, physical properties, and available shapes/sizes, please contact Alro Plastics at 1-800-877-ALRO.

HDPE: HDPE is a high impact strength and high density polyethylene. HDPE has excellent tensile strength, energy absorption, abrasion resistance and resistance to stress cracks. High-density polyethylene, unlike polypropylene, cannot withstand normally-required autoclaving conditions. HDPE is not dimensionally stable so it cannot hold tight tolerances when machined. This product is FDA compliant, in Natrual color only.

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 resistance and tensile strength. Compared to LDPE or HDPE, polypropylene has a lower impact strength but superior working temperatures and tensile strength.

PVC: PVC Type II is a uniquely adaptable polyvinyl chloride displaying excellent thermoforming capabilities, contour definition and surface texture. Available finishes include matte and glossy. Type II is fashioned in the form of homogeneous sheets. This product has great corrosion and chemical resistance, however it is not FDA compliant.

VHMW: There are many cases in which UHMW is specified for installations where its ultimate abrasion and impact resistance are not necessary. VHMW is a unique product designed to be a perfect complement to UHMW and to bridge the wide performance gap between HDPE and UHMW. This material is FDA and USDA approved in the white opaque color.

LDPE: HDPE is a corrosion resistant, extruded material that sustains low moisture permeability. It also has a relatively low working temperature, soft surface and low tensile strength. LDPE is more flexible than HDPE, which makes it a good choice for prosthetic devices, most of which are either drape formed or vacuum formed. Its impact resistance makes it a natural for impact pads, while its easy machinability makes it a good choice for fabricated parts where chemical and corrosion resistance is demanded.

ACRYLIC: 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. An FDA approved grade is available by request.

POLYCARBONATE: (1/2” and under) Polycarbonate is a unique engineering thermoplastic which has an excellent balance of clarity and toughness while displaying a wide range of high-heat deflection temperatures. Toughness is the most outstanding feature of polycarbonate; for applications such as safety shields and sports equipment this durable material is without equal.

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 compliant, however; it will not handle heavy loads or hold tight tolerances.

PHENOLIC CE: Phenolic CE (NEMA CE) consists of a cotton canvas type fabric and electrically insulating phenolic resin system. It is easy to machine and operates with less noise than metal. In addition, this material is not as abrasive as fiberglass alternatives when used in wear applications. Phenolic CE can be used in explosion-proof environments. This material is commonly used to make gears, pulleys, rollers, and guides, as well as electrically insulated parts such as control boards.

NYLON 6 (Cast): This nylon exhibits all the properties which generally make NYLON a superior 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. Cast NYLON is available in a wide variety of FDA approved shapes. It is also available in blue, glass-filled and molybdenum-disulfide filled grades.

Material Selection Guide

Product Descriptions

Continued on next page
NYLATRON® GSM: Nylatron® GSM contains finely divided particles of molybdenum disulphide (MoS²) to enhance its load bearing capabilities while maintaining the impact resistance inherent to nylon. It is the most commonly used grade for gears, sheaves, sprockets and custom parts.

ABS: acrylonitrile-butadiene-styrene, 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. ABS is available in a smooth/smooth, haircell one side, and haircell both sides surface finish. ABS also works very well with the vacuum forming process and is a preferred material. An FDA compliant grade is available.

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

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. TIVAR® 88 can be fabricated and welded to provide a solution for nearly any application. Available in an anti-static formulation.

DELRIN®: Delrin®, a homopolymer acetal, is also manufactured and stocked in rod and plate. It offers slightly higher mechanical properties than Acetron® GP acetal, but may contain a low-density center, especially in larger cross-sections. Delrin® is ideal for small diameter, thin-walled bushings that benefit from the additional strength and rigidity of homopolymer acetal. Delrin® natural grade is made from a resin that is FDA, NSF and USDA compliant.

NYLON 101® (Extruded): This industry standard for machined plastic is characterized as having an excellent combination of physical properties including; high strength, a high melting point, resistance to repeated impact, low coefficient of friction and resistance to abrasion. It has good resistance to fuels, lubricants and most chemicals, but is attacked by phenols, strong acids and oxidizing agents. This material is FDA compliant.

NYLATRON® GS: Molybdenum disulphide (MoS²) filled nylon offering improved strength and rigidity. With a lower coefficient of linear thermal expansion than Nylon 101®, Nylatron® GS parts maintain better fit and clearances, and have less tendency to seize as bearings.

POLYURETHANE: or Urethane, is a unique material that offers the elasticity of rubber combined with the toughness and durability of metal. Because urethane is available in a very broad hardness range (flexible-soft to rigid-hard), it allows the engineer to replace rubber, plastic and metal with the ultimate in abrasion resistance and physical properties. Polyurethane can be cast to size or to print using a mold. It is available in a wide range of colors and hardnesses.

CPVC: Although CPVC is based on PVC, and shares a few of the same characteristics, it is still a unique polymer. CPVC is a high temperature grade (up to 200°F) chlorinated polyvinyl chloride that provides excellent corrosion resistance, high heat resistance, chemical resistance, inherent flame resistivity, good tensile strength, weatherability and is easily fabricated. These characteristics make CPVC a useful material in a wide range of markets including the chemical processing and metal finishing industries.

PTFE / TFE (Polytetrafluoroethylene): PTFE is a member of the fluorocarbon family and very well known for its chemical and heat resistance. It is insoluble in almost all organics. PTFE also resists attack by most corrosive chemicals, retains its strength in extreme temperatures and because it absorbs little energy, excels as electrical insulation. Impact strength is high, but its resistance to wear, tensile strength and creep resistance are low in comparison to other engineering materials. This material is 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.
Material Selection Guide

NORYL®: NORYL® modified PPO is a strong, tough engineering plastic with outstanding mechanical, thermal and electrical properties. Low moisture absorption and low thermal expansion make NORYL® one of the most dimensionally stable thermoplastics available. NORYL’s hydrolytic stability makes it a good choice for many applications where fluids are present. It's FDA compliance makes it suitable in food-based applications.

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. In wear applications, Nylatron® NSM lasts up to 10 times longer than standard Type 6 nylon. It provides weight and noise reduction, corrosion resistance, and easy machining. With less downtime and reduced maintenance, save time and money by realizing the increased performance and productivity of this self-lubricating nylon. It is not FDA compliant.

ERTALYTE® PET-P: An unreinforced, semi-crystalline thermoplastic polyester. Its excellent wear resistance, low coefficient of friction, high flexural modulus and superior dimensional stability make it a versatile material for designing mechanical and electromechanical parts. Because PET has no centerline porosity, the possibility of fluid absorption and leakage is virtually eliminated. PET is somewhat brittle and FDA compliant.

POLYCARBONATE (Window Grade): is an engineering plastic with excellent dimensional stability and good strength and stiffness over a wide range of service temperatures. Window grade is often used for structural applications when clarity and impact strength are essential including lenses, manifolds, site glasses, and machine guards. Window grade polycarbonate is optically clear. FDA compliant grades and colors are available on a custom basis.

HYDEX® 4101 (PBT): HYDEX® 4101 is a PBT polyester. In addition to the physical properties of PET, PBT has better impact, lubricity, lower moisture absorption and improved machinability. PBT does not exhibit porosity in the extruded form. This product is offered in many popular standard rod and slab sizes and is FDA compliant.

HYDEX® 4101L: HYDEX® 4101L (Lubricated) is an enhanced version with improved wear, PV range and lubricity over HYDEX® 4101. This products is offered in many popular standard rod and slab sizes and is FDA compliant.

HYDEX® 202 and 301 (Rigid Polyurethane): HYDEX® 202 and 301 are a family of rigid thermoplastic polyurethane products. These resins are unique in that they are amorphous and provide properties such as good impact resistance, good dimensional stability and clarity. These materials are extremely dimensionally stable and are frequently the material of choice when close tolerance and/or difficult geometrical parts are being machined. They also exhibit properties of crystalline polymers by having excellent chemical resistance and low moisture absorption. While HYDEX® 202 is opaque, HYDEX® 301 is transparent, and would replace polycarbonate in applications requiring clarity and chemical resistance. These materials are FDA compliant.

ERTALYTE® 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® TX provides a lower wear rate and coefficient of friction than unmodified polyesters like PET or PBT and even internally lubricated materials like Delrin AF blend. Ertalyte® TX is also FDA compliant.

ULTEM® (DURATRON® PEI): 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 sterilizations. This material is FDA compliant.

KYNAR® PVDF (Polyvinylidene Fluoride): 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. This material is FDA compliant.
Material Selection Guide

Product Descriptions

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.

DELRIN® AF: A combination of oriented PTFE/TFE 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.

PES (Polyethersulfone): This polymer exhibits high resistance to heat and combustion, low smoke emission, low moisture absorption, and generally good mechanical properties. Heat resistance of 398°F at 264 psi can be expected. This material is FDA compliant.

HYDLAR® Z (Nylon/Kevlar): The KEVLAR® filler enhances the physical properties but is not abrasive like glass fillers. KEVLAR® increases the tensile and flexural strength and also increases the impact resistance. This material offers outstanding machinability and is non-abrasive to mating surfaces and tooling. Ideal for structural, high PV and wear resistant applications.

PEEK (Polyetheretherketone): This crystalline, high temperature engineering thermoplastic, offers excellent thermal and chemical resistance properties and outstanding resistance to abrasion and dynamic fatigue. PEEK is ideal for electrical components exposed to heat over 464°F. This material is FDA compliant.

TECHTRON® PPS: Techtron® 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. Minimal moisture absorption and a very low coefficient of linear thermal expansion, combined with Quadrant EPP’s proprietary stress relieving process, make these PPS products ideally suited for precise tolerance machined components.

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. Torlon® 4301 and 4203 resins provide better compressive strength and higher deflection temperature than most other high performance thermoplastics. Their low coefficient of thermal expansion and high creep resistance provide excellent dimensional stability over a wide range of temperatures. This material is not FDA compliant.

TECASINT™: Tecasint™ materials are high temperature polyimides for special applications. Semi-finished products and direct formed finished parts made of Tecasint™ have excellent long-term stability. The broad temperature application spectrum of these materials range from -270°C to +300°C. Even when heated briefly to 350°C, Tecasint™ materials will not melt or soften. Strength, dimensional stability and creep strength remain high under mechanical stress even during long-term usage.

Please visit our website for more product information, physical property sheets and safety data sheets.
Alro Plastics Processing

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

CNC Saw Cutting
With a multitude of CNC Production Saws Alro 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 8" thick quickly and accurately. The large 14 ft x 14 ft tables are able to handle very large sheets allowing for better material yields.

- Quantities: 1 pc - 50,000 pcs
- Thickness: 1/16" up to 8" thick
- Length/Width: 1/2" up to 168" wide/long
- Standard Cut Tolerance: +1/16" / -0"
- Custom tolerances available by request
- Multiple shifts for shortest lead times

Rod and 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.

- Quantities: 1 pc - 10,000 pcs
- Diameter: 1/8" up to 18" diameter
- Length/Width: 1" up to 20 feet long
- Standard Cut Tolerance: +1/4" / -0"
- Custom tolerances available by request
- Solid rounds and hollow rounds

5-Axis Waterjet Cutting
Alro also offers 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 challenging 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.

- Quantities: 1 pc - 20,000 pcs
- Thickness: 1/32" up to 10" thick
- Width: 1/2" up to 78" wide
- Length: 1/2" up to 157" long
- Standard Cut Tolerance: +/- .015"
- Fiberglass, G10, glass-filled materials, rubber, urethane, foam and more
Alro Plastics Processing

CNC Machining

CNC Routing
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.

- Quantities: 1 pc - 50,000 pcs
- Thickness: 1/16” up to 4” thick
- Width: 1/2” up to 120” wide
- Length: 1/2” up to 144” long
- Standard Cut Tolerance: +/- .015”
- Custom tolerances available by request
- Multi-Table Routers for production runs
- Automatic tool changers, up to 32 tools

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.

- Quantities: 1 pc - 10,000 pcs
- Thickness: 1/16” up to 6” thick
- Width: 1” up to 32” wide
- Length: 1” up to 60” long
- Ideal for prototypes and small, complex parts
- Custom tolerances available by request

CAD/CAM Programming
Alro Plastics utilizes the latest CAD/CAM programming software to run our CNC equipment. We can accept customer supplied files in .DWG and .DXF formats and import the data directly into our machines. This software allows us to test run the program in the virtual world before wasting any material or labor time. Our customers can email us CAD data and prints to plastics@alro.com.

- Email: plastics@alro.com
- File Types: .DWG, .DXF, .IGES
- Virtual test runs to prevent errors
- Able to upload customer files directly
- Store files electronically for repeat orders
Alro Plastics Processing

Drilling and Tapping
Our FlexArm equipment allows Alro Plastics to offer in house capability of part tapping and Helicoil inserts. The FlexArm keeps the Helicoil insertion tool perpendicular to the work piece. The depth control ability offers consistency from part to part whether tapping or inserting helicoils. A FlexArm Tapping Machine will take care of prep work such as reaming, chamfering and deburring.

- Quantities: 1 pc - 10,000 pcs
- Thickness: 1/4” up to 4” thick
- Length/Width: 1” up to 120” wide/long
- Helicoil Sizes:
  - Standard: 8-32, 10-24, 10-32, 1/4-20, 3/8-20 and 1/2-13
  - Metric: M3-0.5, M4-0.7, M5-0.8, M6 x 1.0, M8 x 1.25 and M10 x 1.50

Plastic Welding
Alro Plastics has invested the time and resources to become very good at plastic welding and we offer this service to all of our customers. From the simple task of butt-welding two sheets together to make one longer sheet, to the complex process of creating custom fabricated tanks to print, we can do it all.

- Hot gas and modified extrusion welding
- Done in house, better control of lead times
- Pieces machined on routers for best finish
- Experienced welders specializing in plastics
- Many plastics can be welded

Bending and Gluing
Alro Plastics also offers our customers custom fabricated bent and glued parts to print. Some of our thinner gage plastics can be heat bent or cold formed on a press break, mostly our “See-through” materials like Acrylic, Plexiglas, Polycarbonate and PETG. We can also CNC Saw Cut and Router these parts and assemble them together on custom fabricated jobs. ISO certified to ensure high quality finished parts in a timely manner.

- CNC machined edges for the best bonds
- Ability to heat bend plastics per print
- Cold forming and bending also available
- Experienced fabricators specializing in plastics
- Complete assembly of finished parts
Alro Plastics Locations
Servicing Warehouse and Contact Information

(Color shades indicate branch coverage)
Alro Plastics
Your Source for Engineering Plastics
Sheet • Rod • Tube • Film • Profiles • Machined Parts

Our 60,000 square-foot Alro Plastics location in Jackson, Michigan

Sheet, rod, tube, film and profiles
Machined and fabricated parts to print