

A modern, multi-story building with a prominent facade of dark, geometric, perforated panels. The building features a central entrance with a glass door and a large window. The Railim logo is visible on the upper right side of the building. The building is surrounded by lush green trees and a paved area with a few people walking. A red car is partially visible in the bottom right corner.

RAILIM
INDUSTRIAL CORPORATION

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Plastic insulation material, engineering materials, aluminum (5083, 6061, 5052), sus (304/316), brass, copper, and metals.

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MISSION STATEMENT

We are dedicated to offering a diverse range of competitively priced, high-quality engineering plastics and steels, tailored to meet the specific needs of various industries. Through proactive and responsive customer service, we strive to establish lasting and trustworthy relationships with our clients.

VISION STATEMENT

We aim to be a leading supplier of engineering plastics and steels, known for delivering top-notch materials, outstanding service, and timely solutions at affordable prices. Our vision is to consistently nurture our customer relationships with integrity, honesty, and professionalism.



Bakelite

Bakelite sheet is a thermosetting plastic that is highly resistant to heat and electricity, making it an excellent insulator. It is also very strong and durable, and can withstand a lot of wear and tear.

Key Features and Benefits

- Excellent physical, mechanical and dielectric properties
- Withstand all kinds of machining

Applications

- In insulating structural parts
- Electric equipments
- Aeronautical industries

Specifications

Item	Thickness	Color	Size
Sheet	3-100mm	Brown	3021--1020x2020/1220x2440/980x1980 3025--1000x2000/1220x2440
		Orange	
		Black	
Item	Diameter	Color	Length
Rod	6-200mm	Brown	1M, 2M

Phenolic Cotton laminated

Phenolic cotton cloth laminated sheet are manufactured by modified phenolic resin as binder and pure cotton fabric as reinforcement. They have exceptionally good heat resistance and will not creep under high temperature conditions.

Phenolic Paper laminated

Paper-based phenolic laminated sheets are the most commonly seen laminates, as well as having the widest applications and largest usage.



G-10/G-11 FR-4 Epoxy



G-10/ FR-4 is a thermosetting industrial laminate consisting of a continuous filament glass cloth material with an epoxy resin binder. This product, first introduced in the 1950's, has characteristics of high strength, excellent electrical properties and chemical resistance. These properties are maintained not only at room temperature but also under humid or moist conditions.

Key Features and Benefits

- High dielectric strength
- Radiation resistant
- High tensile strength
- Low cold flow or creep
- Chemically resistant
- Dimensional stability
- Low dissipation factor
- High impact strength

Applications

- Electrical equipment
- Aerospace conditions
- Rocket cases
- Antenna insulators
- Test boards
- End plates
- Cryogenic insulation
- Terminal boards

Specifications

Thickness	Color	Size
0.5-100mm	Light Green,Black	1020x1220mm





Appearance:

The board material should be flat and smooth, no bubble, no wrinkle, no crackle, free from other defect, such as scrape, compress, dirt spot and uneven of color, allow a few of color spots.

Specifications

Thickness	Color	Size
0.5-100mm	Yellow	1000x2000,980x1980

3240 sheet(epoxy sheet) is a kind of laminated board formed through heat pressing after the electric industry fiolax cloth dips into epoxy resin. It is suitable as the mechanical, electric and electronic insulation structural components which are used under room and middle temperatures with a certain mechanical performance and electric performance requirement.

- 3240 sheet(epoxy sheet) is made of E-glass cloth impregnated with epoxy phenolic resin by processing under heat and pressure.
- 3240 sheet (epoxy sheet,glass cloth sheet) having high mechanical and dielectric properties,fine heat and humidity resistance.
- 3240 sheet (epoxy sheet,glass cloth sheet) used in electrical machine and devices as insulating construction parts in moist circumstances and in transformer oil.

Item	Unit	Value (A/B)
Density	g/cm ³	1.90~2.30
Martens heat resistance(LW)≥	°C	200
Flexural strength ≥	MPa	400/200
Tensile strength ≥	MPa	350/250
Bonding ≥	N	5680
Impact strength ≥	KJ/M ²	150/100
Surface resistivity ≥	Ω	1×10 ¹³ /1×10 ¹¹
Volume resistivity ≥	Ω.cm	1×10 ¹³ /1×10 ¹¹
Insulation resistance parallel to lamination ≥	Ω	1×10 ¹⁰ /1×10 ⁸
Loss tangent, 50Hz ≤		0.05
Transformer oil at 90±2°C ≥	KV/mm	22/20
Transformer oil at 90±2°C ≥	KV	30



Durostone is a heavy-duty glass fiber reinforced plastic which offers extreme strength and excellent electrical, thermal and chemical properties. Durostone is manufactured by using Polyester, Vinylester, Epoxid- and modified Epoxy resins combined with glass fibers.

It can keep it's mechanical strength, smoothness and original color when continuously used under the temperature of 280°C (max. working temperature below 385 degree 10~20sec). It's applicable in ROHS appliance production line under high temperature continuously.

Key Features and Benefits

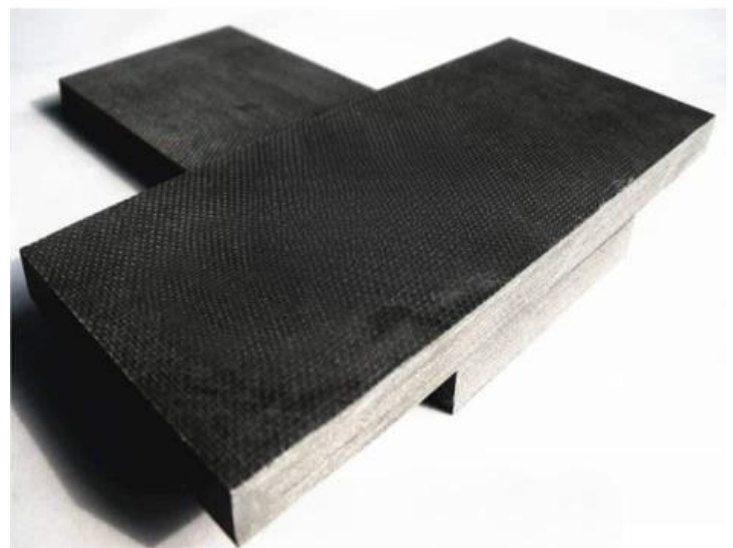
- Normal working temperature at 325 °C, operating temperature up to 384 °C.
- Less distortion
- Superior dimensional stability.
- High temperature resistance
- Resistance to chemical corrosion
- High mechanical strength.
- Good machinability (low density)

Applications

Durostone is suitable to wave soldering and SMT process. It can achieve the precision required during the SMT machining process, and maintain its flatness in the reflow soldering cycle. The low thermal conductivity of the durostone prevents heat-shrinkage of the bas board, to ensure the quality of reflow process.

Specifications

Item	Thickness	Color	Size
Durostone	3-25mm	Blue, Black	1220x2440mm
			1000x1000mm





Polyoxyl Methylen(POM),which is also commonly called ' acetal' , can be divided into homo-polymers and co-polymers . Both types crystallize. POM is a hard material that is resistant to Fatigue and crips and has low friction coefficient and attractive look. The homo-polymers are highly strong in terms of tension and curvature and resistant to fatigue with a high degree of hardness. The co - polymers , which are thermally stable, are highly workable and resistant to heat. They are also very alkaline and stretchable.

Key Features and Benefits

- Highly mechanic and strong in terms of heat and electricity
- Highly fatigue-resistant and crip-resistant
- Yields little friction,highly wear-resistant, and magnetic-lubricating
- Highly resistant to various chemicals(highly alkaline-resistant),heat,and water
- Easily processed using machine and yields products of even sizes
- Recommended for areas requiring a high degree of hygiene and sanitation, such as food

Specifications

Item	Thickness	Color	Size
POM sheet	6-100mm	White, Black	2000x1000mm
			600x1200mm
			1000x1000mm
Item	Diameter	Color	Length
POM Rod	3-300mm	White, Black	1M, 2M
Item	Thickness	Color	
POM Film	0.3-1mm	White, Black	

Applications

- Various precision machine parts,gears,rollers,brackets, and liners
- Insulated products, such as electric and electronic semiconductors
- Wear plates of various slider
- Impeller,screws,wheels
- Food-processing machine parts



ABS (Acrylonitrile Butadiene Styrene)



ABS (Acrylonitrile Butadiene Styrene) has good chemical and stress resistance. It combines toughness with rigidity and creep resistance. Easily thermoformed resulting in excellent mould detail. Easily machined, die cut, routed, sanded, buffed and polished.

Key Features and Benefits

- High rigidity and impact strength
- Excellent abrasion resistance
- Excellent electrical properties, moisture and creep resistance
- ABS has good chemical and stress cracking resistance to inorganic salt solutions, alkalis and many acids (Except strong oxidizing acids)
- ABS is easily machined to close tolerances, is tough, dimensionally stable and may be thermoformed

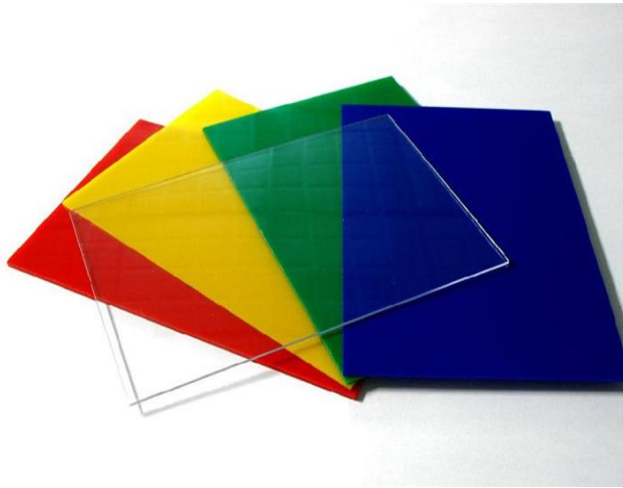
Specifications

Item	Thickness	Color	Size
ABS sheet	1-100mm	Nature, Black Transparent	2000 x1000mm
			3000 x1500mm
			1220 x 2440mm
Item	Diameter	Color	Length
ABS Rod	10-300mm	White, Black, Nature	1M, 2M

Applications

- Automotive interior and exterior
- Aircraft interior trims
- Home appliances
- Architectural model buildings & Prototype Models
- Luggage
- Machine parts and rollers
- Pipes & fittings
- Trays





Acrylic is a crystal clear thermoplastic material possessing excellent mechanical and chemical properties. Outstanding optical qualities and resistance to both sunlight and outdoor weathering make acrylic an ideal glazing material. Acrylic can be easily cemented, welded, thermoformed and machined, making it an extremely versatile material.

Key Features and Benefits

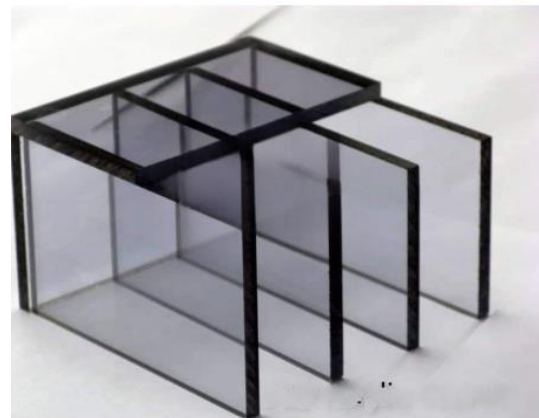
- Weather resistant.
- Lightweight.
- Easily formed, sawed, machined and cemented.
- Excellent light transmission.
- Better chemical resistance than continuously manufactured sheets.

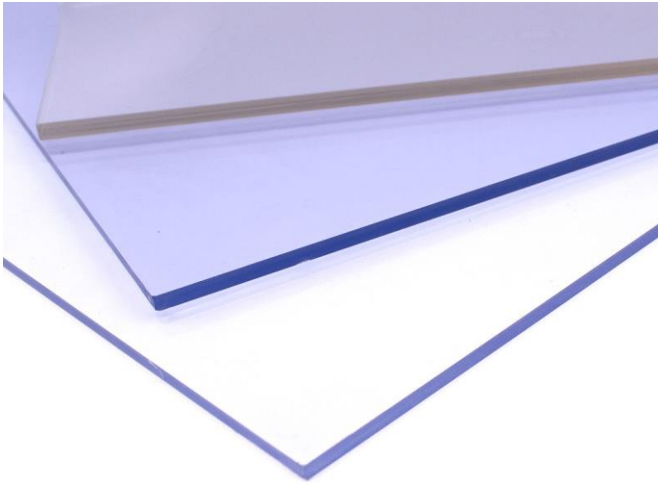
Applications

- Signs
- Store displays
- Furniture
- Glazing
- Skylights
- Boutique items
- Laboratory fixtures
- Sight glasses

Specifications

Item	Thickness	Color	Size
Cast acrylic sheet	2-200mm	clear, black,red	2000x1000mm
			1220x2440mm
			2000x3000mm
Item	Thickness	Color	Size
Extruded acrylic sheet	1-10mm	clear, black,red	2000x1000mm
			1220x2440mm
Item	Diameter	Color	Length
Acrylic Rod	10-300mm	clear, black,red	1M, 2M
Item	Thickness	Color	Length
Acrylic Tube	10-200mm	clear, black,red	1M, 2M





Key Features and Benefits

- Excellent impact resistance (polycarbonate is 250 times stronger than glass)
- Very good optical properties
- Ability to be cold formed in thinner gauges
- Moderate chemical and scratch resistance
- Self extinguishing
- Excellent acoustic properties
- Corrosion and rust free
- Maintenance free

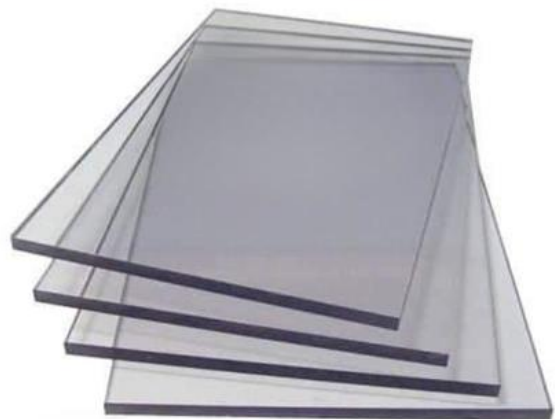
Applications

- Safety: Machine safety guards, safety barriers, machine enclosures, safety visors.
- Viewing Panels: Noise control enclosures, switchgear cabinets, scientific instrumentation, forklift screens, duct worksite panels, earth moving machines.
- Glazing: Bus shelters, sports stadiums, vandal protection, signage.
- Machined Parts: Precision engineering components, insulating ports for electrical engineering, level indicators, medical and pharmaceutical devices, components in contact with food.

Polycarbonate sheet is often compared to perspex sheet (acrylic) because of its appearance, but polycarbonate sheeting is a much tougher plastic product altogether. It is unique for its impact resistance and shock load resistance. Polycarbonate is lightweight and is UV stabilized. It is very tough, easy to handle and can easily be fabricated to almost any shape. Polycarbonate sheeting is also available in an abrasion resistant grade and in grey and opal tints. Polycarbonate is a great choice for windows where additional safety is required, for example in race cars, earthmoving equipment and horsefloats.

Specifications

Item	Thickness	Size
Polycarbonate Sheet	0.15-12mm	2440x1200mm
		2440x1830mm
		2000x1000mm
Item	Diameter	Length
Polycarbonate Rod	6-100mm	1M, 2M





Polyurethane is a liquid urethane polymer that can be cured to a range of hardnesses. Polyurethane has excellent resistance to abrasion, oils, many chemicals, solvents and oxidation, while maintaining high tensile strength and resilience. This combination of properties makes urethane a unique material. Having the elasticity of rubber, polyurethane also combines many of the advantages of rigid plastic and metal.

Key Features and Benefits

- High load bearing capacity
- More durable than conventional elastomers
- Can be machined, drilled, sawn, turned and shaped on standard metalworking equipment
- Width range of physical properties
- Can be processed to provide a variety of shapes
- High impact resistance
- Low unlubricated coefficient of friction
- Good water resistance
- Resists cracking under repeated flexure
- Remains flexible at very low temperatures

Applications

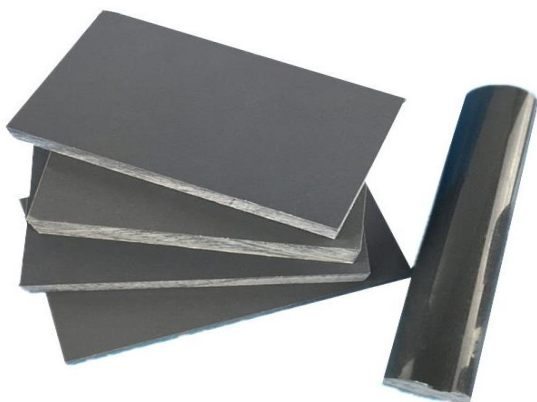
- Conveyor drive and idle rollers
- Hydraulic and pneumatic seals
- Pump impellers
- Bearing pads, rollers, gear wheels, bushes
- Crane wheels
- Conveyor belt scraping blades
- Wear parts
- Printing rollers
- Cyclone nozzles

Specifications

Item	Thickness	Color	Size
Pu sheet	2-100mm	Yellow,red,black	2000x1000mm
			1220x4000mm
			1000x1000mm
Item	Diameter		Length
Pu Rod	10-200mm		1M, 2M



PVC (Polyvinyl Chloride)



Polyvinyl Chloride (PVC) is a thermo plastic material having outstanding corrosion resistance, excellent electric insulating properties and good mechanical strength. The properties of the material can be varied by the addition of fillers, plasticizers, stabilizers and colourants. The material most commonly used in electrical and chemical industries is unplasticized since plasticizers affect adversely chemical and electrical properties. It is a dark grey colour and available in basic shapes such as sheets, rods, hollow bars, pipes and specialty profiles. PVC materials are easily cemented and welded using hot air.

Key Features and Benefits

- Excellent electrical insulating properties
- Very high chemical resistance
- Moderate impact resistance and service temperature
- Very good moisture resistance
- Good dimensional stability
- Bondable
- Self extinguishing
- Fairly inexpensive
- Good for machining
- Thermoformable
- Excellent engineering plastic for welding

Applications

- Chemical storage vessels
- Tanks and tank liners and fittings
- Fume cupboards
- Pump components
- Electrical insulators
- Liquid applications
- Ducting •Acid tanks
- Templates •Fabricated fittings
- Waterfall inserts •Battery boxes

Specifications

Item	Thickness	Color	Size
PVC Sheet	2-50mm	Dark Grey	1220x2440mm
		Light Grey	2000x1000mm
PVC Sheet	0.5-20mm	Clear	1830x915mm
			2440x1220mm
			915x1220mm
PVC Sheet	1-35mm	White	2440x1220mm
Item	Diameter	Color	
PVC Rod	6-200mm	Dark Grey	
Item	Thickness	Color	
PVC Film	0.25mm, 0.5mm, 1.0mm	White Clear	





PTFE is a specialised engineering plastic which has excellent non stick properties – it has a surface to which no substance will adhere. PTFE is not affected by almost all chemicals and solvents and has outstanding dielectric properties, making PTFE sheets the ideal engineering plastic for electrical and thermal insulators, seals, glide rings, etc. PTFE also has excellent UV resistance and is capable of continuous use at 260 degrees centigrade. PTFE sheets are available in a variety of thicknesses from 3mm to 50mm. We supply cut to size PTFE sheets and also supply full PTFE sheets.

Key Features and Benefits

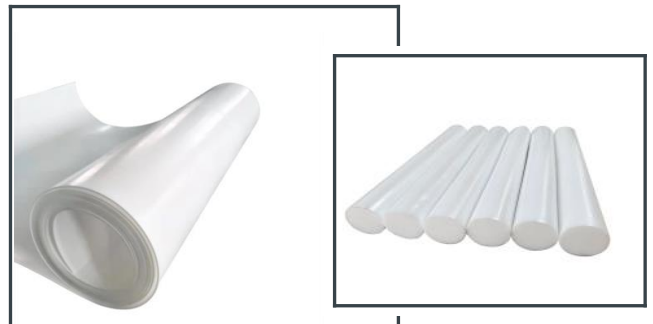
- Excellent chemical and heat resistance
- Lowest co-efficient of friction
- Highest operating temperature and stability
- Physiologically inert
- Excellent electrical properties
- Very expensive
- Can have glass or bronze fillers for wear resistance

Applications

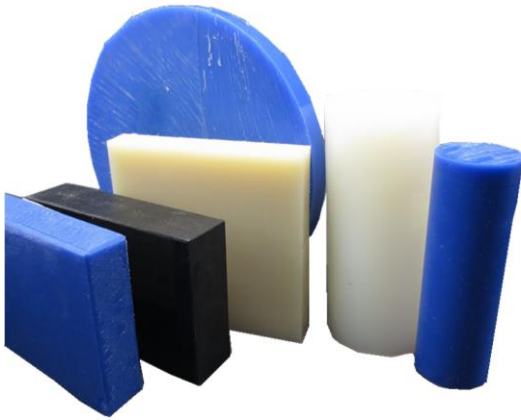
- Seals •Seals •Packings •Chevrons
- Piston Rings, glide rings, lantern rings and back up rings
- Slide bearings
- Electrical and thermal insulators
- Wear plates
- Bushes •Bearings in chemical pumps
- O-Rings •Envelope Gaskets
- Bellows •Linings (chemical)
- Valve Seats

Specifications

Item	Thickness	Size
PTFE Sheet	0.5-100mm	1000x1000mm
		1200x1200mm
		600x600mm
Item	Diameter	Color
PTFE Rod	6-250mm	black white
Item	Thickness	Width
Skived PTFE Rolls	0.2-6mm	1200mm



NYLON/ PA6



Nylon is the generic name for a family of long-chain polymeric amides. General characteristics of the nylons include toughness, strength, abrasion and fatigue resistance, low coefficient of friction, resiliency and heat resistance. Many of these properties can be enhanced by the addition of fillers such as molybdenum disulphide. Nylons are resistant to hydrocarbons, alkalies, ketones and esters.

Key Features and Benefits

- Very high sliding properties
- High mechanical strength
- Good fatigue resistance
- Excellent wear resistance
- Absorbs moisture, therefore, cannot be used underwater
- High impact strength and toughness
- Low Power factor requirements
- High wear resistance

Applications

- Natural nylon is an excellent food grade plastic
- Black nylon is used where lubrication is required
- High load bearings
- Wear pads
- Support and guide wheels
- Conveyor and tension rollers
- Wire rope sheaves
- Buffer pads •Gears, etc.
- High impact wear parts•Bushes

Specifications

Item	Thickness	Color	Size
Nylon Sheet (PA6 extruded)	1-6mm	Green, Blue, White, Black, Yellow	600x1200mm
			2000x1000mm
			1000x1000mm
			1200x2400mm
Nylon sheet (Cast)	10-100mm	Green, Blue, White, Black, Yellow	2000x1000mm
			600x1200mm
			1000x1000mm
Item	Diameter	Color	
Nylon Rod (Extruded)	5-250mm	Green, Blue, White, Black, Yellow	
Item	Thickness	Width	
Nylon Tape Rolls	0.3-2mm	1000mm	





Polypropylene has excellent dielectric strength, excellent chemical resistance and outstanding heat resistance. Its moisture absorption is practically nil and unsurpassed in flexural strength. Unlike polyethylene, polypropylene is not prone to environmental stress cracking. It is harder than polyethylene and has greater tensile strength. Although its heat resistance allows usage is up to 80°C, it does tend to become brittle below 0°C.

Key Features and Benefits

- Very high chemical resistance
- Excellent impact resistance
- Higher scratch resistance than HDPE
- Thermoformable
- Excellent moisture resistance
- Food Grades
- Tough material
- Mechanical strenght - a hard, stiff readilyworkable material
- Impact resistance - excellent food and chemical applications

Applications

- Food or corrosive storage vessels
- Cooling or scrubbing towers
- Pump bodies and components
- Wall cladding
- Plating Tanks and Hoods
- Pipe flanges
- Tanks - chemical storage
- Fume copboards
- Electroplating barrels

Specifications

Item	Thickness	Color	Size
PP Sheet	1-100mm	Grey, white,black	2000x1000mm 3000x1500mm 1220x2440mm
Item	Diameter	Color	Length
PP Rod	10-300mm	Grey, white,black	1M,2M
Item	Thickness	Color	Width
PP Film	0.17-3mm	Red, Yellow,Green.	1200mm





Key Features and Benefits

- Low coefficient of friction.
- Extremely good wear resistance.
- Very high impact strength.
- No water absorption.
- Very good chemical resistance.
- FDA approval USDA approval.
- Can operate at cryogenic temperatures.
- Good dielectric properties.
- Ideal for dirty, gritty abrasion.
- Non-toxic • Non-staining

Applications

- Wear strips
- Chain guides, tensioners and paddles
- Linings for chutes and hoppers
- Star wheels
- Mixer paddles
- Scraper blades
- Slides
- Transfer tables
- Drag conveyor flights

UHMW has a very low coefficient of friction. Frictional wear on unlubricated surfaces in contact with UHMW is less than with any other plastic. UHMW also displays extraordinary resistance to abrasive wear by gritty materials. It is recommended for use at temperature ranging from -250°C to 82°C.

High density polyethylene (HDPE) is used in a variety of applications and industries where excellent impact resistance, high tensile strength, low moisture absorption and chemical- and corrosion-resistance properties are required. It is available in extruded up to 30mm thick and pressed sheet up to 100mm thick.

Specifications

Item	Thickness	Color	Size
UHMWPE sheet HDPE sheet	10-100mm	White, Black, Green	2000x1000mm 3000x1500mm 1220x2440mm
Item	Diameter	Color	Length
UHMWPE Rod HDPE Rod	10-300mm	White, Black	1M,2M





Polyether ether ketone (PEEK) is a representative variety of the poly aryl ether ketone (PAEK) family, a special engineering plastic with excellent comprehensive properties. The rigid benzene ring and flexible ether bond in the molecular structure of PEEK respectively provide excellent mechanical properties and abundant methods in molding as well as machining.

PEEK can be filled with carbon fiber, glass fiber modified to enhance the performance.

Key Features and Benefits

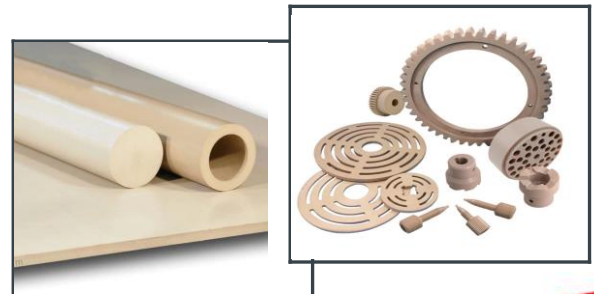
- Maximum continuous operation temperature reaches 250°C
- Excellent impact resistance, creep resistance, and abrasion resistance
- Except for concentrated sulfuric acid, it almost can withstand any other chemicals
- Radiation resistance is the best among all plastics (such as gamma rays)
- With self-extinguishment (UL94V-0) and strong UV resistance
- The highest steam resistance among all engineering plastics
- Non-toxic

Applications

- Electronic and electrical industries, IC wafer carriers, cleaning fixtures for a semiconductor device;
- Testing fixtures, LCD panel or equipment parts;
- Gears, bearings, piston rings, etc. for precision machinery and OA equipment;
- High-insulated terminal parts.

Specifications

Item	Thickness	Color	Size
PEEK Sheet Virgin Resin	5-50mm	Natural, Black	600x1200mm 620x1250mm
GF30- PEEK sheet (30% Glass Fiber)	5-50mm	Natural, Black	600x1200mm
CF30- PEEK sheet (30% Carbon Fiber)	5-50mm	Black	600x1200mm
ESD-PEEK sheet (Anti-static)	5-50mm	Black	600x1200mm
Item	Diameter	Color	
PEEK Rod	6-200mm 20-100mm	Natural, Black	



PEI (Ultem 1000)



PEI (Polyetherimide) which also known as Ultem 1000, is an amorphous amber color plastic. This material demonstrates high stiffness, high mechanical strength, great machinability, and good dimensional stability. It also shows great electronic performance and is always used in the connector industry. Meanwhile, the plastic also exhibits resistance against high-energy radiation.

PEI can be filled with carbon fiber, glass fiber modified to enhance the performance.

Key Features and Benefits

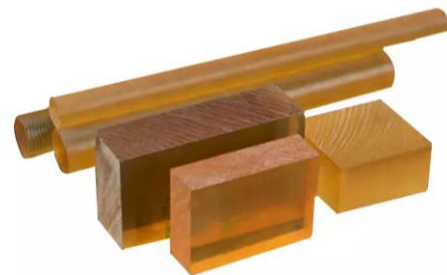
- High dielectric strength
- Very good mechanical strength
- High thermal capacity
- Good dimensional stability
- Good radiation resistance
- Easily machinable to tight tolerance
- High torque strength and hardness
- High heat resistance and weather resistance

Applications

- Reusable medical equipment, analytical instruments, medical accessories
- Electrical/electronic insulators and components of various structural components that require
- high strength and rigidity at high temperatures
- Aircraft interior parts
- Electronics Industry: Soldering Sockets, Spools, Board Substrates
- Car lighting socket, high temperature transformer under the garage

Specifications

Item	Thickness	Color	Size
Ultem PEI Sheet	5-100mm	Amber	600x1200mm
Item	Thickness	Color	Size
ESD- Ultem PEI sheet	5-50mm	Black	600X1200mm
Item	Diameter	Color	Length
Ultem PEI Rod	10-210mm	Amber transparent	1M





PPS (Polyphenylene sulfide) virgin is a semi-crystalline, thermoplastic, high-performance material. It shows very good mechanical strength, very high creep strength, excellent dimension stability, and low water absorption. PPS also has a very high continuous working temperature. This material also shows excellent chemical resistance, there is no known solvent that could dissolve PPS at temperatures below 200°C. Meanwhile, natural and black colors are available.

Key Features and Benefits

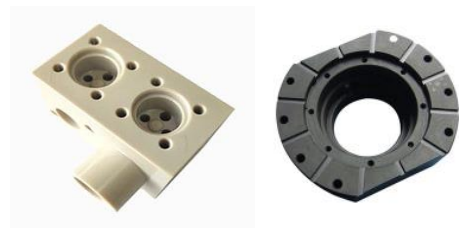
- Effectively improve the inherent brittleness, high purity and good flame retardancy of PPS
- Good rigidity and rigidity
- Excellent wear resistance
- Good dimensional stability
- High dielectric strength
- Low moisture absorption, good heat dissipation and low thermal expansion
- Excellent chemical resistance and radiation resistance

Applications

- Semiconductor machinery components
- Scientific instrumentation parts
- Seals ,pump and valve components
- Bearings and bushings (bearing grade)
- Electrical components

Specifications

Item	Thickness	Color	Size
PPS sheet	6-60mm	Beige, black	600x1200mm
Item	Thickness	Color	Size
40GF-PPS sheet (40% Glass Fiber)	5-50mm	Black	600x1200mm
Item	Thickness	Color	Size
ESD-PPS sheet (Anti-Static)	8-50mm	Black	600x1200mm
Item	Diameter	Color	Length
PPS Rod	8-180mm 15-100mm	Beige, black	1M



Vespel PI (Polyimide)



PI (Polyimide) natural is an unmodified polyimide material that has a very high continuous working temperature up to 310°C. Meanwhile, high-performance plastic also has high rigidity, relatively low water absorption, good machinability, and other excellent benefits.

Vespel® SP-1 is an unfilled polyimide. SP-1 is a high-purity polymer that provides maximum physical strength, elongation, toughness, and outstanding electrical and thermal insulation values. It offers an operating temperature range from cryogenic to 260°C (500°F).

Key Features and Benefits

- High continuous temperature resistance against high energy radiation
- Good thermal stability
- Good chemical resistance
- Excellent mechanical properties
- Low creep and high tensile strength
- Very good heat resistance
- Resistance to weak acidity

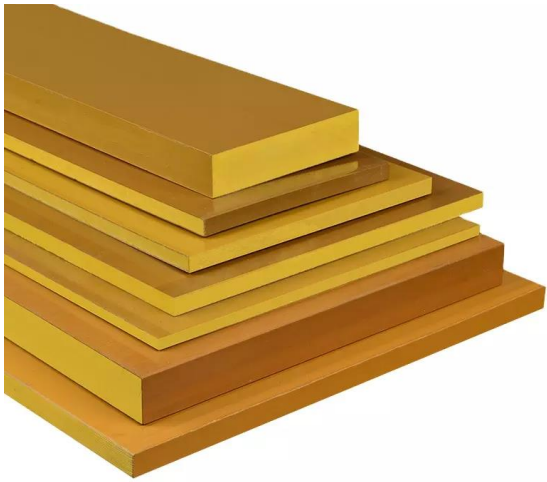
Applications

- Mechanical stress damper
- Semiconductor test components, processing nesting (nest)
- Microelectronic IC test socket (socket) and contactor (contactor)
- Seals, pumps and valve assemblies, bearings and bushings
- Scientific instrument parts, other electronic components
- Insulation and passivation layers and MEMS chip fabrication in digital semiconductors
- Bushings, bearings, sockets or structural parts of demanding applications

Specifications

Item	Thickness	Color	Size
PI (Vespel) sheet	6-40mm	Brown	150x150mm
			300x300mm
Item	Diameter	Color	Length
PI (Vespel) Rod	6-50mm	Brown	305mm, 200mm





Key Features and Benefits

- Maintains strength and stiffness to 500°F (260°C)
- Minimal expansion rate to 500°F (260°C)
- Excellent wear resistance in bearing grades
- Able to endure harsh thermal, chemical and stress conditions
- Low Outgassing Material
- Total Mass Loss (TML%) 1.85%
- Collected Volatile Condensable Materials (CVCM%) 0.00%
- Water Vapor Regained (WVR%) 0.49%

Applications

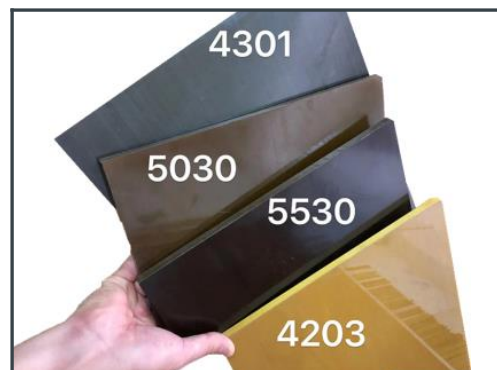
- Can Mandrels
- Semiconductor Parts (Burn In Test Sockets)
- High Temperature Electrical Components
- Insulators & Electrical Connectors
- Seal Rings
- Structural Parts

PAI (polyamide-imide) is a plastic material with good strength and rigidity. PAI is a material with a very low coefficient of thermal expansion and an extremely high dimensional stability, making it a very good choice for applications with tight tolerances. The PAI polymer sheets will not change its properties even at the highest possible operating temperature, and the Polyamideimide parts will work flawlessly even under excessive heat.

Torlon® 4203 PAI is an unfilled polyimide. It also have Torlon® 4301 /5530 / 5030 PAI etc..

Specifications

Item	Thickness	Color	Size
Torlon 4203 PAI Sheet	6-40mm	Yellow	150x150mm
			300x300mm
Item	Diameter	Color	Length
Torlon PAI Rod	6-50mm	Natural, black	305mm 200mm



FAQ

What type of polishing services are available?

We can offer Power Buffing, Diamond Polishing and Flame Polishing services. Diamond Polishing can be used for straightedges and gives excellent results without the rounded edges often produced by buffing. Flame Polishing is ideal for polishing thin edges of acrylic, especially clear extruded sheet for point-of-sale items because its fast and effective. For an ultimate high gloss finish and for bespoke acrylic shapes we can also hand polish the acrylic parts.

What type of cutting services are available?

Here is a great way to save time, we can cut any of our standard items into your custom sizes using our on-site cutting facilities. We have various levels of service depending on the quantity required. All you need to do is choose your material and then go to "Cutting Service" to choose the level of service you require. We provide loose cut of any sizes, rollers, fabrications, profiles and moulding to suit your needs. Where special sizes or shapes are required by our customers, we are able to customize these products according to individual requirements.

Which would be the best plastics for UV resistance?

Most plastics are affected by UV although PTFE provides very good resistance. In other materials, Black offers a reasonable protection option.

Which are the best wear resistant plastics?

Engineering plastics are exceptionally good at wear and abrasion resistance, UHMWPE and Nylon are particularly good.



ACRYLIC



PVC



PP



NYLON



FR4/3240



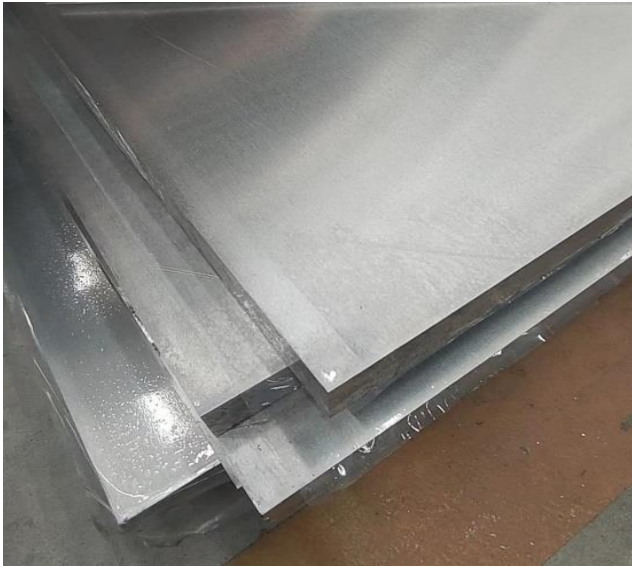
POM



PP FILM



ACRYLIC DISPLAY



Aluminum is a chemical element with the symbol Al and atomic number 13. It is a silvery-white, lightweight, and ductile metal. Aluminum is the third most abundant element in Earth's crust, after oxygen and silicon, and it makes up about 8% of the crust by weight.

Aluminum has a variety of uses due to its desirable properties, including its low density, corrosion resistance, and ability to be easily shaped and formed. Some common applications of aluminum include:

Grade: 6061,1100,5052,5083.

Application

- Lightweight aluminum is extensively used in automobile bodies, aircraft fuselages, and marine vessels to enhance fuel efficiency and performance.
- Aluminum foil and cans are popular choices for packaging food and beverages due to their ability to preserve freshness and resist corrosion.
- Aluminum is employed in heat exchangers, chemical processing equipment, and catalysts due to its thermal conductivity, resistance to corrosion, and suitability for various industrial processes

Key Features and Benefits

Aluminum has a naturally attractive appearance with a metallic sheen. It can be finished in various ways, including anodizing, painting, and powder coating, to enhance its visual appeal and provide additional protection against corrosion and wear.



BRASS



Application

- **Plumbing and Pipe Fittings:** Brass is commonly used in plumbing fixtures, valves, and pipe fittings due to its corrosion resistance, malleability, and ability to be easily formed and machined.
- **Musical Instruments:** Brass instruments like trumpets, trombones, and tubas are made primarily of brass due to its acoustic properties, including its ability to resonate and produce a rich sound.
- **Electrical and Electronics:** Brass is used in electrical connectors, terminals, and sockets due to its excellent conductivity and resistance to corrosion. It's also used in electronic housings and components.
- **Decorative Hardware:** Brass is favored for its aesthetic appeal and is used in various decorative applications such as doorknobs, handles, hinges, and architectural accents.
- **Automotive and Aerospace:** Brass components are used in automotive applications such as radiator cores, radiator caps, and fuel line fittings. In aerospace, brass is used in fittings, connectors, and components due to its strength-to-weight ratio and corrosion resistance.

Brass is a metal alloy primarily composed of copper and zinc, often with other elements added for specific properties. It is valued for its durability, malleability, and attractive golden color, making it widely used in manufacturing, construction, musical instruments, and decorative applications.

Brass, being an alloy of copper and zinc, is used in various industries, including manufacturing, construction, and electronics. Like other commodities, its price can fluctuate based on supply and demand dynamics, economic conditions, and geopolitical factors.

Key Features and Benefits

- **Corrosion Resistance:** Brass exhibits excellent corrosion resistance, particularly against atmospheric corrosion and certain environments like seawater, making it suitable for outdoor and marine applications.
- **Malleability and Formability:** Brass is highly malleable and can be easily formed into complex shapes using techniques such as bending, stamping, and machining, allowing for intricate designs and customized components.





Application

• **Food Processing and Dairy:** Stainless steel is widely used in food processing equipment such as tanks, piping, pumps, and valves due to its corrosion resistance, hygienic properties, and ease of cleaning.

• **Architecture and Construction:** Stainless steel is used in architectural applications such as building facades, handrails, roofing, and cladding due to its aesthetic appeal, durability, and resistance to corrosion in outdoor environments.

• **Medical and Healthcare:** Stainless steel is utilized in medical equipment and devices such as surgical instruments, implants, hospital furniture, and diagnostic equipment due to its biocompatibility, sterilizability, and corrosion resistance.

• **Automotive and Transportation:** Stainless steel is used in automotive components such as exhaust systems, trim, grilles, and decorative elements due to its resistance to corrosion, high-temperature performance, and aesthetic appeal.

• **Chemical and Petrochemical:** Stainless steel is employed in chemical processing equipment, storage tanks, pipelines, and reactors due to its resistance to corrosion from acids, chemicals, and high temperatures.

Stainless steel 304 is a versatile austenitic stainless steel alloy comprising 18% chromium and 8% nickel. It offers excellent corrosion resistance, good formability, and high strength. Stainless steel 304 is non-magnetic and exhibits good weldability and machinability. It finds widespread use in various industries, including food processing, chemical processing, architectural, and automotive applications, among others.

Key Features and Benefits

• **Corrosion Resistance:** Stainless steel exhibits exceptional corrosion resistance, making it highly resistant to rust, stains, and corrosion in various environments, including harsh and corrosive ones.

• **Strength and Durability:** Stainless steel is inherently strong and durable, capable of withstanding heavy loads, high temperatures, and harsh conditions without deformation or deterioration.

• **Excellent Mechanical Properties:** Stainless steel exhibits excellent mechanical properties, including high strength, ductility, toughness, and formability, making it suitable for a wide range of structural and functional applications.

• **Chemical Compatibility:** Stainless steel is compatible with a wide range of chemicals, acids, and solvents, making it suitable for use in chemical processing, pharmaceutical manufacturing, and other industries where chemical resistance is crucial.



COPPER



Application

- **Electrical Wiring and Conductors:** Copper's high electrical conductivity makes it ideal for use in electrical wiring, cables, and conductors, allowing for efficient transmission of electricity in homes, buildings, power plants, and electrical appliances.
- **Plumbing and Piping:** Copper is widely used in plumbing systems, pipes, and fittings due to its corrosion resistance, antimicrobial properties, and ability to withstand high temperatures and pressures in both potable water and heating systems.
- **Electronics and Telecommunications:** Copper is used in electronic components such as printed circuit boards (PCBs), connectors, switches, and integrated circuits due to its electrical conductivity, reliability, and compatibility with soldering processes.
- **Industrial Machinery and Equipment:** Copper alloys such as bronze and brass are used in bearings, bushings, gears, valves, and other mechanical components in industrial machinery and equipment due to their wear resistance, lubricity, and corrosion resistance.

Copper is a ductile, malleable, and highly conductive metal with a reddish-orange color. It is one of the oldest known metals used by humans, prized for its electrical conductivity, thermal conductivity, corrosion resistance, and aesthetic appeal. Copper is commonly used in electrical wiring, plumbing, roofing, industrial machinery, coinage, and decorative applications. It plays a crucial role in various industries, including construction, electronics, transportation, and manufacturing.

Key Features and Benefits

- **Excellent Conductivity:** Copper is one of the best conductors of electricity among all metals, making it ideal for electrical wiring, power transmission, and electronics. Its high electrical conductivity allows for efficient transmission of electricity with minimal energy loss.
- **Superb Thermal Conductivity:** Copper exhibits exceptional thermal conductivity, making it suitable for heat exchangers, HVAC systems, and other applications where efficient heat transfer is required. It helps in dissipating heat quickly and maintaining thermal stability.

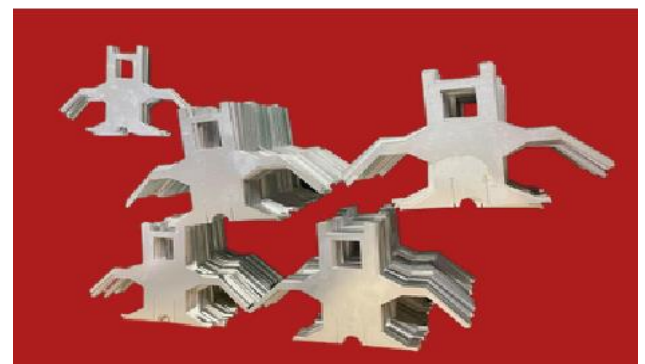


Thermoplastic Products&Size			
Group	Colour/Types	Std Size	Range/Thickness/width
PVC Rigid Sheet	Light Grey	1220*2440mm 1000x2000mm 1500*3000mm	3mm to 50mm
	Dark Grey	1220*2440mm 1000x2000mm 1500*3000mm	3mm to 50mm
	Clear Transparent	1220*2440mm	3mm to 25mm
PVC Flexible Sheet/ Roll	Clear	Width:1200mm 200mm 300mm 400mm	sheet: 0.1 mm to 0.7 mm roll: 0.05mm to 10mm
PVC Rods	Dark Grey	1M,2M	10mm to 200mm
Cast Acrylic Sheet	Clear,White,Red, Green,Yellow	1.22*2.44m/2.05*3.05m/1.5*3m	2mm-250mm
Extruded Acrylic Sheet	Clear,White,Red, Green,Yellow	1220*2440mm	1mm-10mm
PS Sheet	Clear,White,Red, Green,Yellow	1220x2440,1220x1830mm	1mm-10mm
Cast Acrylic Rod	Clear,White,Red, Green,Yellow	1M,2M	20mm-250mm
Extruded Acrylic Rod		1M,2M	6mm-50mm
ABS Sheet	White,Black	600x1200,1200x1200,1300x2000,1220x2440mm	1mm-250mm
POM Sheet	White,Black	600*1200mm/1000*1000mm/ 1200*1200mm/1000* 2000mm	6mm to 100mm
POM Rod	White,Black	1M,2M	3-300mm
PU SHEET	Black,Red,Dark Yellow,Yellow	500*500/600*600/1000*1000/1000*2000mm	2-120mm
PU Rod	Black,Red,Dark Yellow,Yellow	1M,2M,300mm	8mm to 300mm
Group	Colour/Types	Std Size	Range/Thickness/width
PC Sheet	Clear	610*1000/1220*2440mm	3mm-100mm
PP Sheet	White,Black,Grey	1000*2000mm/1500*3000mm/1220*2440mm	2mm to 100mm
PP Rod	White,Black	1M,2M	15mm-300mm
PTFE Sheet	Black,White	600x600,1200x1200,1000x1000mm	3mm to 100mm
Skived PTFE Sheet	Black,White	width: 1220mm	0.2-6mm
PTFE ROD	Black,White	1M,2M,250mm	6mm-300mm
HDPE Sheet	Black,White,Green	1000X1000,1220X2440,1500X6000mm	3mm to 100mm
HDPE Rod	Black,White	1M,2M	20 to 300mm
UHMWPE Sheet	Black,White,Green	1000X1000,1220X2440, 1500X6000mm	10 to 300mm
Extruded Nylon Sheet	White,Black,Blue	1000*1000mm/1000*2000mm/1220*2440mm	3-100mm
Cast Nylon Sheet	White,Black,Blue,Yellow	600*1200mm/1000*2000mm	6-150mm
Extruded Nylon Rod	Blue,White,Nature,Black	1M,2M	5-300mm
Cast Nylon Rod	Blue,White,Nature,Black	700mm,1M	20-300mm
Thermoplastic Products&Size			
Group	Colour/Types	Std Size	Range/Thickness/width
Phenolic Paper Laminated Sheet	Orange,Black, Brown	1020*2040mm	0.5-100mm
Phenolic Cotton Laminated Sheet	Brown	1000*2000mm/1020*1220mm	3-50mm
Phenolic Cotton Laminated Rod	Brown	6mm to 200mm	1M,2M
FR4/ G10 Epoxy Glass Sheet	Light green	1020*1220mm	0.5-50mm
3240 Epoxy Glass Cloth Laminated Sheet	Yellow	1000*2000mm	0.5-100mm
CDM/Durostone sheet	Black,Blue	1020*1220mm/1220*2440mm	3-25mm

Factory & Machines



LASER MACHINE



Plastic insulation material, engineering materials, aluminum (5083, 6061, 5052), sus (304/316), brass, copper, and metals.