



- Specializing in Engineering Grade Materials
- No Minimum Order on In Stock Items
- Fast Quotes
- Large Inventory – Standard and Partial Sizes Available
- Saw Cutting – Cut to Size Pieces Same Day/Next Day Service
- Custom Thickness Surface Flycutting

- Material Certification and Engineering Data
- Lot and Batch Available on Most Materials
- Applications Include:
 - ESD Anti-Static and Conductive
 - Food Grade/Detectable
 - Medical Grade
 - High Temperature
 - Corrosive Environments

Visit us on the web at www.plasticsintl.com, where our online ordering and technical references make it easy to place your stock shape material order day or night.



Shaping the World of Plastics



- ABS
- Acetals
 - Delrin® Homopolymer
 - TECAFORM® Copolymer
- Acetals-PTFE Reinforced
 - Delrin AF® Blend
 - TECAFORM® HPV 13
- Acrylic/PVC Alloys
 - Boltaron®
 - Kydex®
- Fluoropolymers
 - ECTFE (Halar®)
 - ETFE (Tefzel®)
 - FEP
 - PCTFE (Kel-F®)
 - PFA
 - PTFE (Teflon®)
 - PVDF (Kynar®/Solef®)
 - TECAFLON®
- High Pressure Laminates
 - Bakelite®
 - FR-4/G-10 Epoxy Glass
 - G7 Silicone
 - GPO
 - Micarta®
 - Phenolic
 - Vulcanized Fiber/Fish Paper
- Metal & X-Ray Detectable Plastics
 - TECAFORM® UD
 - TECAFORM® AH ID
 - TECAPEEK® ID
- Noryl®
 - TECANYL® MT
- Nylons® 6/6 & 6
 - Nylatron®
 - Nylon® MDS
 - Nyoil®
 - TECAMID®
- PAI
 - TECATOR
 - Torlon®
- PEEK®
 - TECAPEEK® PVX
 - TECAPEEK® (Victrex®)
- PEI
 - Ultem®
 - TECAPEI®
- PES
 - TECASON® E
- Polyesters
 - Mylar® Film
 - PBT
 - HYDEX® 4101/4101L
 - Valox®
 - PET
 - Ertalyte®
 - TECAPET®
- Polyimides
 - Kapton®
 - Meldin®
 - TECASINT®
 - Vespel®
- Polyolefins
 - Cutting Board
 - HDPE
 - LDPE
 - Polypropylene
 - TECAPRO® MT
 - UHMW
- Polystyrene
- Polysulfone
 - TECASON® S
- Polyurethanes
- PPS
 - Ryton®
 - TECATRON®
- Radel
 - TECASON® P
- Reinforced PTFE
 - Rulon®
- See-through Plastics
 - Lexan® Polycarbonate
 - Makrolon® Polycarbonate
 - Optix® Acrylic
 - Polycast® Acrylic
 - Vivak® PETG
- Vinyls
 - CPVC
 - PVC Type I & II

THERMOPLASTICS SELECTION GUIDE

Many of these plastics can be made with fillers and additives that will enhance the physical properties.



PLASTICS INTERNATIONAL™

Phone: 952-934-2303
www.plasticsintl.com

Higher Cost, Temperature and Strength

Higher Cost, Temperature and Strength

IMIDIZED

MATERIALS

Polyimide (PI):
MELDIN®, VESPEL®, IMIDEX®, KAPTON®
Polyamide-imide (PAI):
TECATOR®, TORLON®

KEY CHARACTERISTICS

Very high cost per pound - Excellent physical properties above 400° F
Excellent electrical properties and dimensional stability

HIGH PERFORMANCE

MATERIALS

Polysulfone (PSU) UDEL®
Polyetherimide (PEI) ULTEM®
Polyethersulfone (PES) RADEL A®
Polyphenylsulfone (PPSU) RADEL R®

KEY CHARACTERISTICS

High cost
High temperature
High strength and good stiffness
Hot water and steam resistance

HIGH PERFORMANCE

MATERIALS

Perfluoroalkoxy (PFA)
Polychlorotrifluoroethylene (PCTFE)
Polyphenylene Sulfide (PPS) RYTON®
Fluorinated Ethylene Propylene (FEP)
Polyetheretherketone (PEEK) VICTREX®
Polytetrafluoroethylene (PTFE) TEFLON®
(PTFE with Fillers) RULON®
Ethylene-Tetrafluoroethylene (ETFE) TEFZEL®
Polyvinylidene Fluoride (PVDF) KYNAR®, SOLF®
Ethylene-Chlorotrifluoroethylene (ECTFE) HALAR®

KEY CHARACTERISTICS

High cost
High temperature
High strength
Good chemical resistance and electrical properties

ENGINEERING

MATERIALS

Polycarbonate (PC) HYZOD®, LEXAN®
Polyphenylene Oxide (Mod PPO) NORYL®
Thermoplastic Polyurethane (TPU) ISOPLAST®

KEY CHARACTERISTICS

Moderate cost
Moderate temperature resistance
Moderate strength
Good-excellent impact resistance

ENGINEERING

MATERIALS

Polyamide (PA) NYLON®
Polybutylene Terephthalate (PBT) HYDEX 4101®
Polyoxymethylene (POM) Acetal - DELRIN®, CELCON®
Polyethylene Terephthalate (PET) TECAPET™, ERTALYTE®
High Temp-Ultra High Molecular Weight Polyethelene (UHMW-PE) TIVAR H.O.T.®

KEY CHARACTERISTICS

Moderate cost
Moderate temperature resistance
Moderate strength

COMMODITY

MATERIALS

Polystyrene (PS)
Polyvinyl Chloride (PVC)
Acrylic (PMMA) PLEXIGLAS®
Cellulose Acetate Butyrate (CAB)
Acrylonitrile Butadiene Styrene (ABS)
Polyethylene Terephthalate Glycol (PETG) VIVAK®

KEY CHARACTERISTICS

Low cost
Low temperature resistance
Low strength

COMMODITY

MATERIALS

Polypropylene (PP)
High Density Polyethylene (HDPE)
Low Density Polyethylene (LDPE)
Ultra High Molecular Weight Polyethylene (UHMW-PE) TIVAR®, LENNITE®

KEY CHARACTERISTICS

Low cost
Low temperature resistance
Low strength

AMORPHOUS PLASTICS GENERAL CHARACTERISTICS

**STRUCTURAL APPLICATIONS ONLY
(NOT SUITABLE FOR BEARING AND WEAR)**

- Soften over a broad range of temperature
- Easy to thermoform
- Tend to be translucent or transparent
- Bond well using adhesives and solvents
- Prone to stress cracking
- Poor fatigue resistance
- Poor chemical resistance

SEMI-CRYSTALLINE PLASTICS GENERAL CHARACTERISTICS

**GOOD FOR BEARING AND WEAR AS
WELL AS STRUCTURAL APPLICATIONS**

- Sharp melting point
- Difficult to thermoform
- Tend to be opaque
- Difficult to bond using adhesives and solvents
- Good resistance to stress cracking
- Good fatigue resistance
- Good chemical resistance
- Low coefficient of friction