

# Prototyping properties of Plastics



## ABS

- \* Good for structural applications
- \* High impact strength
- \* Bonds well
- \* Available in sheets and rods

## Polycarbonate(Lexan ®)

- \* High impact strength
- \* High tensile strength
- \* Transparent in thickness up to 1/2"
- \* Available in colors
- \* Available in sheets, rods, tubes

## Polymethyl methacrylate(Plexiglas™)

- \* Excellent optical clarity
- \* Good impact strength and durability

## Acrylic

- \* Transparent applications
- \* Fairly brittle
- \* Useful in sheets

## Nylon

- \* Low coefficient of friction
- \* High strength
- \* Good for medical and food-processing applications
- \* Available in sheets, bars, rods, and tubes

## Delrin

- \* Machines well
- \* Durable, excellent toughness
- \* Resists many solvents
- \* Does not bond well
- \* Available in sheets, bars, rods, and strips

## Teflon™

- \* Low coefficient of friction
- \* High impact resistance
- \* Good for medical and food-processing applications
- \* Available in sheets and rods

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**APT Mold**  
Amazing Prototype and Tooling



### **Ultra high molecular weight polyethylene(UHMW)**

- \*Low coefficient of friction
- \* “Poor person’s Teflon™”
- \*Available in sheets and rods

### **Polycarbonate blend ABS**

- \*High-impact strength even at low temperature,  
working temperature:  $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$
- \*With good strength, high-impact strength,  
good dimension stable
- \*Application: Prototypes, Mechanical part, Automotive, Electronics products
- \*Available in sheets