# MELDIN® HT THERMOPLASTICS MATERIAL COMPARISON



## 1000 Series PPS

Excellent chemical and thermal resistance

#### General

Specific Gravity: 1.39 to 1.57

Continuous use temperature:

+200°C (+390°F)



Design Flexibility: Excellent

### Mechanical

Tensile Strength



85 to 180 MPa (12.3 to 26.1 kpsi)

Elongation



1.0% to 6.5%

Compressive Strength



90 to 155 MPa (13.1 to 22.5 kpsi)

Flexural Strength



65 to 260 MPa (9.4 to 37.7 kpsi)

#### Available as

**Basic Shapes** 

✓ Finished Parts

## **Manufacturing Process**

Hot Compression Molding

- ✓ Isostatic Molding
- ✓ Injection Molding Direct Forming

## 3000 Series PEI

**Excellent mating surface** compatibility

### General

Specific Gravity: 1.40 to 1.65

Continuous use temperature:

+170°C (340°F)



Design Flexibility: Excellent

### Mechanical

Tensile Strength



50 to 135 MPa (7.3 to 19.6 kpsi)

Elongation



5.4% to 7.5%

n.a.

Compressive Strength



Flexural Strength



70 to 155 MPa (10.2 to 22.5 kpsi)

#### Available as

Basic Shapes

✓ Finished Parts

## **Manufacturing Process**

Hot Compression Molding

- ✓ Isostatic Molding
- ✓ Injection Molding Direct Forming

## 4000 Series PAI

Excellent wear resistance under high load

### General

Specific Gravity: 1.43 to 1.51

Continuous use temperature:

+290°C (+555°F)



Design Flexibility: Excellent

### Mechanical

Tensile Strength



110 to 220 MPa (16.0 to 31.9 kpsi)

Elongation



1.5% to 4.8%

Compressive Strength



130 to 250 MPa (18.9 to 36.3 kpsi)

Flexural Strength



150 to 350 MPa (21.8 to 50.8 kpsi)

### Available as

Basic Shapes

✓ Finished Parts

## **Manufacturing Process**

Hot Compression Molding ✓ Isostatic Molding

✓ Injection Molding Direct Forming

# 5000 Series PEEK

**Excellent structural integrity** 

### General

Specific Gravity: 1.30 to 1.51

Continuous use temperature:

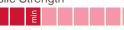
+260°C (+500°F)



Design Flexibility: Excellent

### Mechanical

Tensile Strength



90 to 230 MPa (13.1 to 33.4 kpsi)

Elongation

1.2% to 20%



Compressive Strength



110 to 240 MPa (16.0 to 34.8 kpsi)

Flexural Strength



125 to 330 MPa (18.1 to 47.9 kpsi)

### Available as

- ✓ Basic Shapes
- ✓ Finished Parts

## **Manufacturing Process**

- ✓ Hot Compression Molding Isostatic Molding
- ✓ Injection Molding Direct Forming



