# Mott Porous Metal Data Sheet

**Media Grade:** 0.1  
**Type:** Iso Pressed Tube  
**Alloy:** 316LSS  
**Inside Diameter:** 0.375 inches  
**Outside Diameter:** 0.500 inches  
**Issued:** 06/25/10

## Manufacturing Specifications
- **Bubble Point, inch of Hg:** 7.0 - 9.0
- **Minimum Tensile, kpsi:** 30.6
- **Yield Strength, kpsi:** 28.8
- **Young's Modulus, x 10^6 psi:** 14.7

## Permeability Coefficient
- **Liquid, $K_L$:** 110
- **Gas, $K_G$:** 1000

### Pressure Drop Formulas
- **Liquid:** $Pressure\ Drop, \ psi = (K_L)(Flux, \ gpm/ft^2)(Visc, \ cp)(Thck, \ inch)$
- **Gas:** $Pressure\ Drop, \ psi = (K_G)(Flux, \ acfm/ft^2)(Visc, \ cp)(Thck, \ inch)$

## Particle Removal Efficiency

<table>
<thead>
<tr>
<th>Particle Efficiency</th>
<th>Liquid Efficiency</th>
<th>Testing per ASTM F795</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Tensile, kpsi</td>
<td>30.6</td>
<td>Tested at 1 gpm/ft^2</td>
</tr>
<tr>
<td>Yield Strength, kpsi</td>
<td>28.8</td>
<td>90% at 0.14 µm</td>
</tr>
<tr>
<td>Young's Modulus, x 10^6 psi</td>
<td>14.7</td>
<td>99% at 0.35 µm</td>
</tr>
<tr>
<td>Air Efficiency</td>
<td></td>
<td>99.9% at 0.6 µm</td>
</tr>
</tbody>
</table>

### Notes:
1. Tests run at 70 °F
2. Tests run with water, other curves generated using Liquid Formula

## Flow Characteristics

**Notes:**
1. Tests run with air at 70 °F

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*Flow Characteristics on these data sheets are typical and should be used for general reference only.*
**Mott Porous Metal Data Sheet**

**Media Grade:** 0.2  
**Type:** Iso Pressed Tube  
**Alloy:** 316LSS  
**Inside Diameter:** 0.375 inches  
**Outside Diameter:** 0.500 inches  
**Issued:** 06/25/10

<table>
<thead>
<tr>
<th>Manufacturing Specifications</th>
<th>Permeability Coefficient</th>
<th>Particle Removal Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bubble Point, inch of Hg</td>
<td>Liquid, $K_L$</td>
<td>Liquid Efficiency</td>
</tr>
<tr>
<td>Minimum Tensile, kpsi</td>
<td>Gas, $K_G$</td>
<td>Testing per ASTM F795</td>
</tr>
<tr>
<td>Yield Strength, kpsi</td>
<td></td>
<td>90% at 0.4 μm</td>
</tr>
<tr>
<td>Young’s Modulus, x $10^6$ psi</td>
<td></td>
<td>99% at 0.8 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99.9% at 1.2 μm</td>
</tr>
</tbody>
</table>

**Liquid: Pressure Drop, psid =**

$$ (K_L)(\text{Flux, gpm/ft}^2)(\text{Visc, cp})(\text{Thck, inch}) $$

**Gas: Pressure Drop, psid =**

$$ (K_G)(\text{Flux, acfm/ft}^2)(\text{Visc, cp})(\text{Thck, inch}) $$

**Flow Characteristics on these data sheets are typical and should be used for general reference only.**

**Notes:**

1. Tests run at 70 °F
2. Tests run with water, other curves generated using Liquid Formula

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Flow Characteristics on these data sheets are typical and should be used for general reference only.
Mott Porous Metal Data Sheet

Media Grade: 0.5
Type: Iso Pressed Tube
Alloy: 316LSS
Inside Diameter: 0.375 inches
Outside Diameter: 0.500 inches

Issued: 06/25/10

Manufacturing Specifications
Bubble Point, inch of Hg 3.0 - 3.9
Minimum Tensile, kpsi 18.9
Yield Strength, kpsi 17.1
Young’s Modulus, x 10^6 psi 8.3

Permeability Coefficient
Liquid, K_L 20
Gas, K_G 154

Particle Removal Efficiency
Liquid Efficiency
- 90% at 0.9 µm
- 99% at 1.6 µm
- 99.9% at 2 µm

Gas: Pressure Drop, psid =
(K_G)(Flux, acfm/ft²)(Visc, cp)(Thick, inch)

Air Efficiency
- >90% for all particle sizes
- >99% for all particle sizes
- 99.9% at 0.25 µm

Notes:
1 - Tests run at 70 °F
2 - Tests run with water, other curves generated using Liquid Formula

Pressure Drop, psid

100
10
1
Liquid Flow, gpm/ft²

100, 50, 20, 10, 5, 2, 1 cp

Notes:
1 - Tests run with air at 70 °F

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Flow Characteristics on these data sheets are typical and should be used for general reference only.
Media Grade: 1  
Type: Iso Pressed Tube  
Alloy: 316LSS  
Inside Diameter: 0.375 inches  
Outside Diameter: 0.500 inches

### Manufacturing Specifications
- **Bubble Point, inch of Hg**: 2.0 - 2.5
- **Minimum Tensile, kpsi**: 15.3
- **Yield Strength, kpsi**: 13.5
- **Young’s Modulus, x 10^6 psi**: 6.5

### Permeability Coefficient
- **Liquid, K_L**: 9.2
- **Gas, K_G**: 60

#### Liquid: Pressure Drop, psid =
\[(K_L)(\text{Flux, gpm/ft}^2)(\text{Visc, cp})(\text{Thck, inch})\]

#### Gas: Pressure Drop, psid =
\[(K_G)(\text{Flux, acfm/ft}^2)(\text{Visc, cp})(\text{Thck, inch})\]

### Particle Removal Efficiency
- **Liquid Efficiency**
  - 90% at 1.4 µm
  - 99% at 2 µm
  - 99.9% at 3 µm
- **Testing per ASTM F795**
- **Air Efficiency**
  - Tested at flux of 6 acfm/ft²
  - >90% for all particle sizes
  - 99% at 0.25 µm
  - 99.9% at 0.4 µm

### Notes:
1. Tests run at 70 °F
2. Tests run with water, other curves generated using Liquid Formula

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**Notes:**
1. Tests run with air at 70 °F.
**Mott Porous Metal Data Sheet**

**Media Grade:** 2  
**Type:** Iso Pressed Tube  
**Alloy:** 316LSS  
**Inside Diameter:** 0.375 inches  
**Outside Diameter:** 0.500 inches  
**Issued:** 06/25/10

**Manufacturing Specifications**
- **Bubble Point, inch water**: 17.0 - 24.0
- **Minimum Tensile, kpsi**: 11.9
- **Yield Strength, kpsi**: 10.9
- **Young’s Modulus, x 10^6 psi**: 5.1

**Permeability Coefficient**
- **Liquid, K_L**: 4.9
- **Gas, K_G**: 33

**Particle Removal Efficiency**
- **Liquid Efficiency**: Testing per ASTM F795
  - 90% at 4 µm
  - 99% at 5.5 µm
  - 99.9% at 9 µm

**Air Efficiency**: Tested at flux of 6 acfm/ft²
- 90% at 0.3 µm
- 99% at 0.6 µm
- 99.9% at 2 µm

**Notes:**
1. Tests run at 70 °F
2. Tests run with water, other curves generated using Liquid Formula

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**Liquid: Pressure Drop, psid**

\[
\text{Liquid: Pressure Drop, psid} = (K_L)(\text{Flux, gpm/ft}^2)(\text{Visc, cp})(\text{Thck, inch})
\]

**Gas: Pressure Drop, psid**

\[
\text{Gas: Pressure Drop, psid} = (K_G)(\text{Flux, acfm/ft}^2)(\text{Visc, cp})(\text{Thck, inch})
\]

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**Flow Characteristics on these data sheets are typical and should be used for general reference only.**
Mott Porous Metal Data Sheet

Media Grade: 5  
Type: Iso Pressed Tube  
Alloy: 316LSS  
Inside Diameter: 0.375 inches  
Outside Diameter: 0.500 inches  
Issued: 06/25/10

Manufacturing Specifications
- Bubble Point, inch water: 13.0 - 16.9
- Minimum Tensile, kpsi: 8.3
- Yield Strength, kpsi: 7.6
- Young’s Modulus, x 10^6 psi: 3.7

Permeability Coefficient
- Liquid, $K_L$: 2.4
- Gas, $K_G$: 11

Particle Removal Efficiency
- Liquid Efficiency: 90% at 5 µm, 99% at 8 µm, 99.9% at 13 µm
- Gas Efficiency: Tested at 1 gpm/ft²
- Air Efficiency: 90% at 0.8 µm, 99% at 2 µm, 99.9% at 5 µm

Notes:
1 - Tests run at 70 °F
2 - Tests run with water, other curves generated using Liquid Formula

Liquid: Pressure Drop, psid = ($K_L$)(Flux, gpm/ft²)(Visc, cp)(Thck, inch)
Gas: Pressure Drop, psid = ($K_G$)(Flux, acfm/ft²)(Visc, cp)(Thck, inch)

Notes:
1 - Tests run with air at 70 °F

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Sheets are typical and should be used for general reference only.
Mott Porous Metal Data Sheet

Media Grade: 10
Type: Iso Pressed Tube
Alloy: 316LSS
Inside Diameter: 0.375 inches
Outside Diameter: 0.500 inches

Issued: 06/25/10

Manufacturing Specifications
- Bubble Point, inch water: 7.5 - 10.9
- Minimum Tensile, kpsi: 6.7
- Yield Strength, kpsi: 5.4
- Young’s Modulus, x 10^6 psi: 2.9

Permeability Coefficient
- Liquid, \( K_L \): 1.4
- Gas, \( K_G \): 5.3

Particle Removal Efficiency
- Liquid Efficiency: Testing per ASTM F795
  - 90% at 10 µm
  - 99% at 15 µm
  - 99.9% at 20 µm
- Air Efficiency: Tested at flux of 6 acfm/ft^2
  - 90% at 4.5 µm
  - 99% at 8 µm
  - 99.9% at 13 µm

\textbf{Notes:}
1. Tests run at 70 °F
2. Tests run with water, other curves generated using Liquid Formula

\textbf{Flow Characteristics:}
- Liquid: \( \text{Pressure Drop, psid} = (K_L)(\text{Flux, gpm/ft}^2)(\text{Visc, cp})(\text{Thck, inch}) \)
- Gas: \( \text{Pressure Drop, psid} = (K_G)(\text{Flux, acfm/ft}^2)(\text{Visc, cp})(\text{Thck, inch}) \)

\textbf{Notes:}
1. Tests run with air at 70 °F

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\textit{Flow Characteristics on these data sheets are typical and should be used for general reference only.}
## Mott Porous Metal Data Sheet

**Media Grade:** 20  
**Type:** Iso Pressed Tube  
**Alloy:** 316LSS  
**Inside Diameter:** 0.375 inches  
**Outside Diameter:** 0.500 inches  
**Issued:** 06/25/10

### Manufacturing Specifications
- **Bubble Point, inch water:** 5.0 - 7.0
- **Minimum Tensile, kpsi:** 5.1
- **Yield Strength, kpsi:** 4.5
- **Young's Modulus, x 10^6 psi:** 2.3

### Permeability Coefficient
- Liquid, \( K_L \): 1.0
- Gas, \( K_G \): 4.6

### Particle Removal Efficiency
- **Liquid Efficiency**  
  - 90% at 20 µm  
  - 99% at 25 µm  
  - 99.9% at 35 µm  

- **Gas Efficiency**  
  - 90% at 8 µm  
  - 99% at 12 µm  
  - 99.9% at 20 µm

### Testing
- **Testing per ASTM F795**  
  - Tested at 1 gpm/ft²

### Flow Characteristics
- **Liquid: Pressure Drop, psid**  
  \[ (K_L)(Flux, \text{ gpm/ft}^2)(\text{Visc, cp})(\text{Thck, inch}) \]

- **Gas: Pressure Drop, psid**  
  \[ (K_G)(Flux, \text{ acfm/ft}^2)(\text{Visc, cp})(\text{Thck, inch}) \]

### Notes:
1. Tests run at 70 °F  
2. Tests run with air at 70 °F  

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*Flow Characteristics on these data sheets are typical and should be used for general reference only.*
### Mott Porous Metal Data Sheet

**Media Grade:** 40  
**Type:** Iso Pressed Tube  
**Alloy:** 316LSS  
**Inside Diameter:** 0.344 inches  
**Outside Diameter:** 0.500 inches  
**Issued:** 06/25/10

#### Manufacturing Specifications
- Bubble Point, inch water: 3.0 - 4.0
- Minimum Tensile, kpsi: 3.6
- Yield Strength, kpsi: 3.1
- Young's Modulus, x 10^6 psi: 1.8

#### Permeability Coefficient
- **Liquid:** $K_L = 0.40$
- **Gas:** $K_G = 2.6$

#### Particle Removal Efficiency
- **Liquid Efficiency:**
  - 90% at 25 µm
  - 99% at 35 µm
  - 99.9% at 45 µm
- **Gas Efficiency:**
  - 90% at 12 µm
  - 99% at 25 µm
  - 99.9% at 45 µm

#### Calculations
- **Liquid: Pressure Drop, psid** =
  
  $$(K_L)(\text{Flux, gpm/ft}^2)(\text{Visc, cp})(\text{Thck, inch})$$

- **Gas: Pressure Drop, psid** =
  
  $$(K_G)(\text{Flux, acfm/ft}^2)(\text{Visc, cp})(\text{Thck, inch})$$

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#### Graphs

**Liquid Flow vs. Pressure Drop**
- Flow Characteristics on these data sheets are typical and should be used for general reference only.

**Air Flow vs. Pressure Drop**
- Flow Characteristics on these data sheets are typical and should be used for general reference only.

### Notes:
1. Tests run at 70 °F
2. Tests run with water, other curves generated using Liquid Formula

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*Flow Characteristics on these data sheets are typical and should be used for general reference only.*
**Media Grade:** 100  
**Type:** Iso Pressed Tube  
**Alloy:** 316LSS  
**Inside Diameter:** 0.314 inches  
**Outside Diameter:** 0.500 inches

<table>
<thead>
<tr>
<th>Manufacturing Specifications</th>
<th>Permeability Coefficient</th>
<th>Particle Removal Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bubble Point, inch water</td>
<td>Liquid, $K_L$</td>
<td>Liquid Efficiency</td>
</tr>
<tr>
<td>Minimum Tensile, kpsi</td>
<td>0.20</td>
<td>90% at 50 µm</td>
</tr>
<tr>
<td>Yield Strength, kpsi</td>
<td>2.8</td>
<td>99% at 100 µm</td>
</tr>
<tr>
<td>Young’s Modulus, x 10^6 psi</td>
<td>1.3</td>
<td>99.9% at 150 µm</td>
</tr>
</tbody>
</table>

**Liquid Efficiency**
- Tested per ASTM F795
- Tested at 1 gpm/ft²

**Gas Efficiency**
- 90% at 20 µm
- 99% at 40 µm
- 99.9% at 100 µm

**Notes:**
1. Tests run at 70 °F
2. Tests run with water, other curves generated using Liquid Formula

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**Notes:**
1. Tests run with air at 70 °F

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**Flow Characteristics on these data sheets are typical and should be used for general reference only.**