Mott Porous Metal Data Sheet

Media Grade: 0.5
Type: Pressed Cups
Alloy: 316LSS
Outer Diameter: 0.5 inches
Inner Diameter: 0.250 inches
Length: 1.0 inches

Manufacturing Specifications
Bubble Point, inch of Hg 3.0 - 3.9
Minimum Tensile, kpsi 21.1
Yield Strength, kpsi 11.5
Young’s Modulus, x 10^6 psi 8.3

Permeability Coefficient
Liquid, K_L 14.5
Gas, K_G 160

Particle Removal Efficiency
Liquid Efficiency
Testing per ASTM F795
90% at 0.8 µm
99% at 1.4 µm
99.9% at 1.8 µm

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

Air Efficiency
Tested at flux of 6 acfm/ft²
>90% for all particle sizes
>99% for all particle sizes
>99.9% for all particle sizes

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

Notes:
1 - Tests run with air 70 °F
2 - Tests run with upstream pressure exhausting to atmosphere

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

**Media Grade:** 2  
**Type:** Pressed Cups  
**Alloy:** 316LSS  
**Outer Diameter:** 0.5 inches  
**Inner Diameter:** 0.250 inches  
**Length:** 1.0 inches

## Manufacturing Specifications
- **Bubble Point, inch water:** 17.0 - 24.0
- **Minimum Tensile, kpsi:** 12.8
- **Yield Strength, kpsi:** 7.2
- **Young’s Modulus, x 10^6 psi:** 5.1

## Permeability Coefficient
- **Liquid:** $K_L = 1.7$  
- **Gas:** $K_G = 21$

### 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 3.5 µm  
  - 99% at 5 µm  
  - 99.9% at 8 µm
- **Air Efficiency:**
  - 90% at 0.2 µm  
  - 99% at 0.4 µm  
  - 99.9% at 1.3 µm

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

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![Graph](image)

**Liquid Flow, gpm/ft² vs. Pressure Drop, psid**

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

**Air Flow, acfm/ft² vs. Pressure Drop, psid**

- 10  
- 1

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

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### Notes:
1. Tests run with air 70 °F  
2. Tests run with upstream pressure exhausting to atmosphere

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**Mott Corporation**

84 Spring Lane, Farmington, CT 06032-3159  
860-747-6333  Fax 860-747-6739  
www.mottcorp.com
# Mott Porous Metal Data Sheet

<table>
<thead>
<tr>
<th>Media Grade:</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type:</td>
<td>Pressed Cups</td>
</tr>
<tr>
<td>Alloy:</td>
<td>316LSS</td>
</tr>
<tr>
<td>Outer Diameter:</td>
<td>0.5 inches</td>
</tr>
<tr>
<td>Inner Diameter:</td>
<td>0.250 inches</td>
</tr>
<tr>
<td>Length:</td>
<td>1.0 inches</td>
</tr>
</tbody>
</table>

## Manufacturing Specifications
- **Bubble Point, inch water**: 13.0 - 16.9
- **Minimum Tensile, kpsi**: 9.5
- **Yield Strength, kpsi**: 6.8
- **Young’s Modulus, x 10^6 psi**: 3.7

## Permeability Coefficient
- **Liquid, \( K_L \)**: 1.1
- **Gas, \( K_G \)**: 12.5

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

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

## Particle Removal Efficiency
- **Liquid Efficiency**
  - 90% at 4.5 \( \mu \)m
  - 99% at 7 \( \mu \)m
  - 99.9% at 11 \( \mu \)m
- **Gas Efficiency**
  - Tested at flux of 6 acfm/ft²
  - 90% at 0.5 \( \mu \)m
  - 99% at 1.3 \( \mu \)m
  - 99.9% at 3.5 \( \mu \)m

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

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

Media Grade: 10  
Type: Pressed Cups  
Alloy: 316LSS  
Outer Diameter: 0.5 inches  
Inner Diameter: 0.250 inches  
Length: 1.0 inches

Manufacturing Specifications
- Bubble Point, inch water: 7.5 - 10.9
- Minimum Tensile, kpsi: 5.0
- Yield Strength, kpsi: 3.7
- Young’s Modulus, x 10^6 psi: 2.9

Permeability Coefficient
- Liquid, \( K_L \): 0.56
- Gas, \( K_G \): 7.0

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: Testing per ASTM F795
  - 90% at 9 μm
  - 99% at 14 μm
  - 99.9% at 18 μm

- Air Efficiency: Tested at flux of 6 acfm/ft²
  - 90% at 3.5 μm
  - 99% at 6 μm
  - 99.9% at 10 μm

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

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

Flow Characteristics:
- Liquid Flow, gpm/ft² vs. Pressure Drop, psid
- Air Flow, acfm/ft² vs. Pressure Drop, psid

Notes:
1. Tests run with air 70 °F
2. Tests run with upstream pressure exhausting to atmosphere

mott corporation
84 Spring Lane, Farmington, CT 06032-3160  
860-747-6333 Fax 860-747-6739  
www.mottcorp.com
### Manufacture Specifications

- **Type:** Pressed Cups
- **Alloy:** 316LSS
- **Outer Diameter:** 0.5 inches
- **Inner Diameter:** 0.250 inches
- **Length:** 1.0 inches

### Permeability Coefficient

- **Liquid,** $K_L$: 0.43
- **Gas,** $K_G$: 3.3

**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 18 µm
  - 99% at 22 µm
  - 99.9% at 30 µm

- **Air Efficiency**
  - Tested at flux of 6 acfm/ft²
  - 90% at 5 µm
  - 99% at 9 µm
  - 99.9% at 15 µm

### 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**

<table>
<thead>
<tr>
<th>Media Grade:</th>
<th>40</th>
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<tbody>
<tr>
<td>Type:</td>
<td>Pressed Cups</td>
</tr>
<tr>
<td>Alloy:</td>
<td>316LSS</td>
</tr>
<tr>
<td>Outer Diameter:</td>
<td>0.5 inches</td>
</tr>
<tr>
<td>Inner Diameter:</td>
<td>0.250 inches</td>
</tr>
<tr>
<td>Length:</td>
<td>1.0 inches</td>
</tr>
</tbody>
</table>

**Manufacturing Specifications**

Bubble Point, inch water: 3.0 - 4.0
Minimum Tensile, kpsi: 3.1
Yield Strength, kpsi: 2.2
Young’s Modulus, x 10^6 psi: 1.8

**Permeability Coefficient**

<table>
<thead>
<tr>
<th>Media</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>$K_L$</td>
</tr>
<tr>
<td>Gas</td>
<td>$K_G$</td>
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</table>

**Particle Removal Efficiency**

<table>
<thead>
<tr>
<th>Media</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>Testing per ASTM F795</td>
</tr>
<tr>
<td></td>
<td>Tested at 1 gpm/ft²</td>
</tr>
<tr>
<td></td>
<td>90% at 22 µm</td>
</tr>
<tr>
<td></td>
<td>99% at 32 µm</td>
</tr>
<tr>
<td></td>
<td>99.9% at 40 µm</td>
</tr>
<tr>
<td>Air</td>
<td>Tested at flux of 6 acfm/ft²</td>
</tr>
<tr>
<td></td>
<td>90% at 10 µm</td>
</tr>
<tr>
<td></td>
<td>99% at 20 µm</td>
</tr>
<tr>
<td></td>
<td>99.9% at 40 µm</td>
</tr>
</tbody>
</table>

**Notes:**

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

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**Graphs:**

1. **Liquid Flow vs. Pressure Drop**
   - Graph shows pressure drop in psid for different liquid flow rates (gpm/ft²) and viscosities (cp).
   - Equation: \[ P = (K_L) (F, gpm/ft²) (V, cp) (T, inch) \]

2. **Air Flow vs. Pressure Drop**
   - Graph shows pressure drop in psid for different air flow rates (acfm/ft²) and viscosities (cp).
   - Equation: \[ P = (K_G) (F, acfm/ft²) (V, cp) (T, inch) \]

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**Notes:**

1. Tests run with air 70 °F
2. Tests run with upstream pressure exhausting to atmosphere

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**Flow Characteristics:**

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

Media Grade: 100
Type: Pressed Cups
Alloy: 316LSS
Outer Diameter: 0.5 inches
Inner Diameter: 0.250 inches
Length: 1.0 inches

Manufacturing Specifications
Bubble Point, inch water 0.5 - 1.5
Minimum Tensile, kpsi 1.1
Yield Strength, kpsi 0.9
Young’s Modulus, x 10^6 psi 1.3

Permeability Coefficient
Liquid, \( K_L \) 0.15
Gas, \( K_G \) 0.70

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

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

Particle Removal Efficiency

<table>
<thead>
<tr>
<th>Efficiency</th>
<th>Testing per ASTM F795</th>
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</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>Tested at 1 gpm/ft^2</td>
</tr>
<tr>
<td>90%</td>
<td>at 45 µm</td>
</tr>
<tr>
<td>99%</td>
<td>at 90 µm</td>
</tr>
<tr>
<td>99.9%</td>
<td>at 140 µm</td>
</tr>
</tbody>
</table>

Air Efficiency

90% at 18 µm
99% at 35 µm
99.9% at 90 µm

Notes:
1. Tests run with air 70 °F
2. Tests run with upstream pressure exhausting to atmosphere

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