SermaShield™ Magna coatings deliver unmatched non-stick protection in extreme temperatures
Outperform conventional non-stick coatings
SermaShield Magna non-stick, abrasion-resistant coatings

**Gentle release, tough wear resistance**

SermaShield Magna coatings are especially suited to the unique needs of the food and pharmaceutical processing industry. The proprietary coating system delivers unmatched wear resistance in processing equipment.

- Cost-effective solution for applications that require non-stick protection
- Fusion-bonded non-stick surface
- Proprietary intermediate layer
- Superior wear resistance, even in extreme temperatures

**OUTPERFORM, OUTWEAR, OUTLAST**

SermaShield Magna coatings outperform, outwear and outlast conventional non-stick coatings.

**SermaShield Magna coatings are an exclusive, proprietary system**

The secret behind the SermaShield Magna coating system is the proprietary intermediate layer, which provides unparalleled protection against wear.

- Low friction processing
- FDA and USDA compliant
- Proprietary abrasion-resistant layer just below top surface
- Can be machined to exact tolerances and smoothness
- Thickness up to 20 mils

Choose SermaShield Magna coatings for applications that require non-stick protection that can perform at high temperatures.
n-resistant coatings you can count on

Get more from SermaShield Magna coatings

Easy release
The fusion-bonded non-stick surface ensures that almost all substances release easily.

Extreme temperatures
May be used for applications where temperatures reach up to 500°F without loss of physical properties.

Reduced friction
Depending on the load, sliding speed and particular finish used, the coefficient of friction ranges from 0.05–0.20.

Simplified cleanup
The special oil- and water-resistant surface is not easily wet, allowing for self-cleaning or making cleanup easier and more efficient.

Nonconductive
High dielectric strength, low dissipation factor and very high surface resistivity over a wide range of frequencies.

Chemical resistance
Normally unaffected by chemical environments (with the exception of alkali metals and highly reactive fluorinating agents).

Physical properties of SermaShield Magna coatings

<table>
<thead>
<tr>
<th>Property</th>
<th>ASTM</th>
<th>Units</th>
<th>SermaShield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combustibility</td>
<td>-</td>
<td>-</td>
<td>Non-combustible</td>
</tr>
<tr>
<td>Density</td>
<td>-</td>
<td>°F</td>
<td>-310 to +500</td>
</tr>
<tr>
<td>Linear coefficient of thermal expansion</td>
<td>D-696</td>
<td>X10-5°F</td>
<td>5.4</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-</td>
<td>°F</td>
<td>-310 to +500</td>
</tr>
<tr>
<td>Surface resistivity</td>
<td>D-257</td>
<td>Ohm/in.²</td>
<td>10¹⁷</td>
</tr>
<tr>
<td>Tear elongation</td>
<td>D-638</td>
<td>%</td>
<td>300</td>
</tr>
<tr>
<td>Tear strength</td>
<td>D-1922</td>
<td>g/mil</td>
<td>40-70</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>D-882</td>
<td>lbs./in.²</td>
<td>4,000-7,000</td>
</tr>
<tr>
<td>Thermal conductivity at 23°C</td>
<td>BTU/hr/sq. ft. °F/in.</td>
<td>BTU/hr/sq. ft. °F/in.</td>
<td>1.5</td>
</tr>
<tr>
<td>Vacuum</td>
<td>-</td>
<td>Full vacuum capability</td>
<td>-</td>
</tr>
<tr>
<td>Water absorption</td>
<td>D-570</td>
<td>%</td>
<td>&lt;0.03</td>
</tr>
</tbody>
</table>

Applications

- Augers
- Blenders
- Centrifuges
- Chutes
- Coating pans
- Cookers
- Cutters
- Conveyors
- Dryer trays
- Enrobers
- Feeders
- Freeze dryers
- Hoppers
- Kettles
- Mixers
- Molds
- Rollers
- Rounders
- Tanks
- Trays
- Troughs
Praxair Surface Technologies
Industry-leading services for chemical processing

Signature solutions
Praxair Surface Technologies can create custom answers to your unique coating problems, adapting our application techniques to match your operating environment—so you can be assured you’ve got protection that fits.

Experience and expertise
For more than half a century, we’ve been innovating and growing the way we coat high-performance parts. Our innovative research teams developed many of the materials and processes in use today throughout the industry.

Praxair’s exclusive Coat2Go™ turnkey services
When you’re ready to add additional processing equipment to your operation, let us do the work for you. Our exclusive Coat2Go turnkey services will:
• Purchase all parts and accessories
• Coat each part for maximum protection in your operating environment
• Inspect, test, deliver and assemble the new parts

To learn more about SermaShield Magna coatings or our Coat2Go turnkey services, contact one of our custom coating engineers:

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