What is AMSR?
AMSR is a coating that contains compounds that suppress the growth of certain bacteria, molds, mildews, and fungi on the coating. When applied to products, the coating contains compounds developed by a leading antimicrobial developer and manufacturer.

What type of antimicrobial protection does it provide?
Simply put, antimicrobial protection means that AMSR inhibits the growth of bacteria and a range of other microorganisms that can cause odors, staining, deterioration, corrosion and contamination.

Why should you select AMSR coatings on your products?
AMSR reduces odors and promotes freshness by attacking the very source of a universal problem - bacteria, fungi, and other microorganisms on the coating. This long-lasting treatment is used in many ways to enhance product performance and address consumer concerns on matters of environmental freshness. Furthermore, AMSR can withstand flowing water and is fingerprint resistant, which gives the product a cleaner, more alluring look.

How does it work?
Our coatings contain compounds which work similar to the way chlorine works. When bacteria appear on the surface of the coating, the compounds make contact with the bacteria and disrupt the bacteria’s attempt to live and remain comfortable. Instead of continuing to grow, the bacteria will not grow, and after a short period of time, the bacteria can no longer be measured by standard laboratory equipment.

How long will the coating last?
The coatings, when applied correctly, should remain on the surface for the useful life of the product. Since the coating is non-sacrificial as long as the coating remains on the surface, the compound should remain in effect.

How is it applied?
AMSR is a clear coating that is sprayed over a base coat. This way a product can be color coated first, or have a protective electro-deposition base coat that provides excellent corrosion protection and then apply the clear AMSR coating.
AMSR Frequently Asked Questions

How much does it cost?
A precise cost will depend on many factors, including the final coating thickness, the gauge of the material, and the application method. In general, AMSR will add a moderate, yet affordable cost to your product. For more details, please contact your Carnes sales representative.

AMSR Antimicrobial Efficiency Test

Bacteria Test
New York State — Quantitative Assessment of Bacterial Activity

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Contact Time</th>
<th>Fungal Growth</th>
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</thead>
<tbody>
<tr>
<td>Sample Control Coated Steel</td>
<td>24 Hours</td>
<td>576,000</td>
</tr>
<tr>
<td>AMSR Coated Steel</td>
<td>24 Hours</td>
<td>&lt;1,000</td>
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Fungal Test
Dried Film Test (ASTM G 21-96) — Quantitative Assessment of Fungal Activity

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Contact Time</th>
<th>Fungal Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Control Coated Steel</td>
<td>28 Days</td>
<td>Yes</td>
</tr>
<tr>
<td>AMSR Coated Steel</td>
<td>28 Days</td>
<td>No</td>
</tr>
</tbody>
</table>

Sample Control Coated Steel
Fungal Growth
Rust Formation

AMSR Coated Steel
No Fungal Growth
No Rust Formation