Intersleek® 900

Information Booklet

Biocide Free Foul Release Technology

- New unique patented fluoropolymer underwater hull coating
- Slick, low friction surface
- Lower fuel consumption
- Enhanced speed
- Reduces engine load
- Maximum performance when cleaned regularly
- Contains no biocides
- Long lasting
Introduction

INTERSLEEK® 900 – THE ENVIRONMENTALLY FRIENDLY BOTTOM COATING SYSTEM

Intersleek 900 is a unique concept in bottom coating technology. The Intersleek 900 System is not like traditional antifouling bottom coatings in that it does not contain any biocides.

The Intersleek system consists of an epoxy primer; a unique silicone tie coat and finally a silicone/fluoropolymer finish coating. It is this silicone/fluoropolymer finish coating that is the key to the whole system.

Traditional antifouling bottom coatings depend on the release of biocides to repel the adhesion of and prevent the growth of fouling pests.

Intersleek 900 is a dramatic departure from traditional antifouling technology. The extremely smooth and slippery surface of the finish coat is what is known as a ‘low surface energy’ finish. Fouling organisms generally have a difficult time forming an attachment to a ‘low surface energy’ finish and when they are successful only do so very weakly. Therefore, any and all fouling organism attachment can be easily removed. Hence, Intersleek 900 is a ‘fouling control system’ or ‘foul release’ bottom coating system. Intersleek 900 is an amphiphilic coating that provides a smooth surface that reduces drag and delivers improved fuel savings; ships have averaged 6% more fuel savings over traditional antifouling paints. Sailboats will notice increased speed through the water.

All this is achieved without the use of biocides, which clearly differentiates Intersleek 900 from traditional antifouling technology. With Intersleek 900 ‘fouling control’ is provided for by the ‘low surface energy’ of the finish coat, not by releasing biocides that eventually become exhausted. The ‘fouling control’ of Intersleek 900 is effective for as long as the system and finish coat remains intact. This means that the expected longevity of Intersleek 900 is longer than that of traditional antifouling paints.

Example of an Intersleek 900 System:

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SUBSTRATE  INTERPROTECT® 2000E

INTERPROTECT® 2000E
SEAWATER

INTERSLEEK® 731
TIE COAT

INTERSLEEK®
FINISH COAT
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**Intersleek® 900**

**NOW A LITTLE ABOUT THE TECHNOLOGY**

Intersleek 900 has been formulated to make it very difficult for fouling organisms to adhere to the coated surface. The surface energy has been engineered in such a way that a very unattractive surface is presented to the fouling organism.

**Average Hull Roughness (AHR)**

Average Hull Roughness (AHR) is of critical importance. Vessels’ hulls need to be as smooth as possible for maximum efficiency. As hull roughness increases, more power is required to push the vessel through the water – more power means more fuel – more fuel means more money and more emissions. Those vessels unable to increase power to compensate for increased roughness will lose speed resulting in slower transit times or late arrivals.

**Surface energy**

Surface energy quantifies the disruption of chemical bonds that occurs when a surface is created. It is the interaction between the forces of cohesion and the forces of adhesion which determines whether or not wetting, i.e. the spreading of a liquid over a surface occurs. If complete wetting does not occur, then a bead of liquid will form with a contact angle which is a function of the surface energies of the system. If the surface is hydrophobic then the contact angle of a drop of water will be larger. If the surface is hydrophilic then the contact angle will be smaller.

**Polar and dispersive forces**

By measuring the contact angle with two liquids, one polar liquid (such as water) and one apolar liquid (such as methylene iodide), the surface energy can be divided into two components, dispersive and polar.

This gives a measure of how many polar and dispersive (non-polar) groups there are at the surface. The introduction of polar groups in an otherwise non-polar surface will produce a surface that is amphiphilic i.e. the surface combines both hydrophilic and hydrophobic properties.

Intersleek 900 provides such an amphiphilic surface. It has been established that marine fouling organisms secrete an adhesive, either of a hydrophobic or hydrophilic nature depending on the fouling species. By having a balanced amphiphilic surface we can minimize the chemical and electrostatic adhesion between the surface and a wide range of fouling organisms.
Intersleek® 900

Surface energy: Foul release

To fully understand how fouling adheres to submerged surfaces and what force is required to remove them, at International Paint we grow our own barnacles and have developed a sophisticated computer controlled system to apply force to the barnacle (cleverly named the Barnacle Push Off Apparatus) and record the force required to effect removal. It takes 40% less shear force is needed to remove barnacles from Intersleek 900 when compared to silicone systems.

Foul release properties are particularly important for pleasure craft that spend long periods at the dock. The excellent foul release properties of Intersleek 900 means that even during long periods of inactivity, fouling attachment can be either removed by the vessel getting under way, or if underwater cleaning is the option selected then less force is required to remove the fouling growth so less damage may result. Slime build-up can occur on all foul release coatings but Intersleek 900 technology combines advanced surface energy characteristics and an ultra smooth surface to reduce slime build-up by 50% over previous foul release systems.

The better static resistance and improved foul release properties of Intersleek 900 means the product is also suitable for use on new builds during fitting out periods.
**Intersleek® 900**

**APPLICATION INFORMATION**

**Typical Application Systems**

**Roller**

<table>
<thead>
<tr>
<th>#</th>
<th>Coat</th>
<th>Product</th>
<th>Color</th>
<th>DFT (mils)</th>
<th>WFT (mils)</th>
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<tbody>
<tr>
<td>1</td>
<td>Full coat</td>
<td>InterProtect® 2000E</td>
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<td>2.7</td>
<td>6.7</td>
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<tr>
<td>4</td>
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<td>InterProtect® 2000E</td>
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<tr>
<td>5</td>
<td>Full coat</td>
<td>Intersleek 731</td>
<td>Pink</td>
<td>4</td>
<td>6.4</td>
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<tr>
<td>6</td>
<td>Full coat</td>
<td>Intersleek 970</td>
<td>Various</td>
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<td>2.7</td>
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<tr>
<td>7</td>
<td>Full coat</td>
<td>Intersleek 970</td>
<td>Various</td>
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<tr>
<td>8</td>
<td>Full coat</td>
<td>Intersleek 970</td>
<td>Various</td>
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**Airless Spray**

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<th>#</th>
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<th>WFT (mils)</th>
</tr>
</thead>
<tbody>
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<td>InterProtect 2000E*</td>
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<tr>
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<td>InterProtect 2000E</td>
<td>White</td>
<td>4.9</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Full coat</td>
<td>InterProtect 2000E</td>
<td>Gray</td>
<td>4.9</td>
<td>12</td>
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<tr>
<td>4</td>
<td>Full coat</td>
<td>Intersleek 731</td>
<td>Pink</td>
<td>4</td>
<td>6.4</td>
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<tr>
<td>5</td>
<td>Full coat</td>
<td>Intersleek 970</td>
<td>Various</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

*Thin first coat of Interprotect 2000E 15% with Y2316N

Besides InterProtect 2000E other primers can be used such as InterProtect 3000, InterProtect 2000VOC and Interprime 450. Please contact Interlux for the exact specification.

Full Application Manual and Product Datasheets for each product are available on the Internet at [www.yachtpaint.com](http://www.yachtpaint.com)

**Application equipment**

Airless spray is the preferred method of application for the Intersleek 900 System, since it gives the smoothest possible finish. It is recommended that airless spray pump ratios of 40:1 or greater should be used. However, it is possible to repair small areas by applying the Intersleek 900 System by roller, if the following precautions are observed:

Full application details are in the Intersleek Application Manual which is available at [www.yachtpaint.com](http://www.yachtpaint.com)
Intersleek® 900

FOULING: WHAT TO EXPECT

This coating does not contain an active biocide; hence it cannot actively repel the attachment of fouling growth. The purpose of the Intersleek 900 System is to create a ‘low surface energy’ which proves extremely difficult for growth to attach. Once fouling has begun, the adhesion is weak and the sooner it can be removed the easier it will be to remove. For example, a barnacle that has begun to grow on the Intersleek 900 surface and is less than the size of a pencil eraser can easily be removed. The smooth, ‘low surface energy’ coating of Intersleek 900 surfaces provides a weak platform for growth to permanently adhere.

The more the boat is used the cleaner it will stay with minimal underwater cleaning. With power boats, higher running speeds will also contribute to the self-cleaning properties of the coating.

Inspection and cleaning

Both the method of underwater cleaning and its frequency will greatly influence the success of the performance of the Intersleek 900 system. As there is no active biocide in the Intersleek 900 System, its ability to protect the boat from fouling is dependent upon how frequently the boat is used, how fast the boat goes, the severity of the fouling conditions in the docking area and the amount of frequency of underwater cleaning.

The proper equipment for all in-water maintenance of an Intersleek 900 bottom system is:

- Soft terry cloth towel
- Fleece hand mitt
- Soft sponge
- 12” x 12” square of soft ‘high pile’ carpeting
- Soft ‘long bristle’ scrub brush
- Window squeegee
- Suction handles – for holding on to hull while cleaning

- X-14® Mildew Remover for cleaning away stubborn ‘oil stains’ on waterline

The finish of Intersleek 900 can be damaged by the use of aggressive cleaning products that can cause abrasion.

Cleaning at haul-out

Clean the Intersleek 900 System using a low pressure fan-jet water wash.

Recommended cleaning hints

The frequency at which a boat will need to be cleaned will be dictated by the local fouling conditions. A helpful recommendation for normal Intersleek 900 cleaning would be to wipe the bottom of the boat down on a monthly basis. An average 35’ sailboat can be wiped down in about 20-30 minutes time using nothing more than a soft cloth.

The longer a boat is left between cleanings the bigger chore it will become and the risk of damage to the surface during cleaning increases.

Please call Interlux for common cleaning practices in your specific region at 1-800-468-7589.

More cleaning information is available in the Intersleek Owners Manual which is available at www.yachtpaint.com.
### Intersleek® 900 Product Range List

**INTERSLEEK 731 TIE COAT**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
<th>Size</th>
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</thead>
<tbody>
<tr>
<td>BXA730/2.5</td>
<td>Intersleek 731 Tie Coat Base</td>
<td>2.5 Gallon*</td>
</tr>
<tr>
<td>BXA731/1</td>
<td>Intersleek 731 Tie Coat Cure</td>
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* There is only 1 gallon of material in the 2.5 gallon can to leave room for mixing.

**INTERSLEEK 970 TOP COAT**

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<tbody>
<tr>
<td>FXA970/1</td>
<td>Intersleek 900 Base – White</td>
<td>1 Gallon</td>
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<tr>
<td>FXA972/1</td>
<td>Intersleek 900 Base – Blue</td>
<td>1 Gallon</td>
</tr>
<tr>
<td>FXA980/QT</td>
<td>Intersleek 900 Cure</td>
<td>1 Quart</td>
</tr>
<tr>
<td>FXA981/HP</td>
<td>Intersleek 900 Accelerator</td>
<td>1 Half Pint</td>
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**SOLVENTS**

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>216</td>
<td>Special Thinner</td>
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<tr>
<td>2316N</td>
<td>Reducing Solvent for Spraying</td>
<td>1 Gallon</td>
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