

# PLASMA BIONICS

## MATERIAL COMPATIBILITY WITH AIR PLASMA STERILIZATION®

### COMPATIBILITY WITH COMMON PACKAGING

The Air Plasma Sterilization® process is compatible with commonly used sterile barrier packaging. This includes **SMS wraps** and **Tyvek® pouches**. The process is not compatible with non-porous cellulosic materials such as paper, cardboard, and textiles (e.g., cloth and linen). Some pouches designed for steam and ethylene oxide may become brittle when used with Air Plasma Sterilization®. When purchasing pouches to use in an Air Plasma Sterilizer, it is best to ensure the word “Tyvek®” is printed on the box, pouch, or packaging material.

### COMPATIBILITY WITH MEDICAL DEVICE MATERIALS

Ozone (O3), nitrogen dioxide (NO2), and other reactive oxygen and nitrogen species are powerful oxidants that can be used to sterilize many materials. However, the high oxidation potentials of these sterilants may result in degradation of some materials. The Air Plasma Sterilization® process has been tested with different materials commonly used in medical practices including metals, polymers, glass, and plastics. Some mild discoloration or yellowing may occur with some dyed elastomers and plastics.

The following lists of compatible and incompatible materials are not exhaustive. For inquiries about compatibility of specific materials, please contact [info@plasmabionics.com](mailto:info@plasmabionics.com).

COMPATIBLE MATERIALS			
<p><b><u>METALS</u></b></p> <p>Stainless steel (300 series, medical grade)                      Titanium                      Anodized aluminum                      Gold plating</p>	<p><b><u>PLASTICS</u></b></p> <p>Polytetrafluoroethylene (PTFE, Teflon)                      Polyvinylidene difluoride (PVDF, Kynar)                      Acrylonitrile butadiene styrene (ABS)                      Polybutylene terephthalate (PBT)                      Polyethylene (PE, HDPE, UHMWPE)                      Polyether ether ketone (PEEK)</p>	<p><b><u>ELASTOMERS</u></b></p> <p>Silicone*                      Fluorosilicone                      Viton (FKM)                      Santoprene                      Tygon                      Ethylene propylene diene monomer (EPDM)</p>	<p><b><u>OTHER</u></b></p> <p>Glass                      Ceramic</p>

INCOMPATIBLE MATERIALS					
<p><b><u>METALS</u></b></p> <p>Mild steel                      Galvanized steel                      Brass</p>	<p>Zinc                      Tin</p>	<p>Nickel                      Bronze                      Copper</p>	<p><b><u>PLASTICS</u></b></p> <p>Nylon                      Delrin (Acetal)                      Polyamide</p>	<p><b><u>ELASTOMERS</u></b></p> <p>Natural rubber                      Buna-N (Nitrile)</p>	<p><b><u>OTHER</u></b></p> <p>Cellulosic material (paper, cardboard, textiles)</p>

\*There are numerous blends, grades, and varieties of silicone. It is advised to test specific blends prior to routine use.