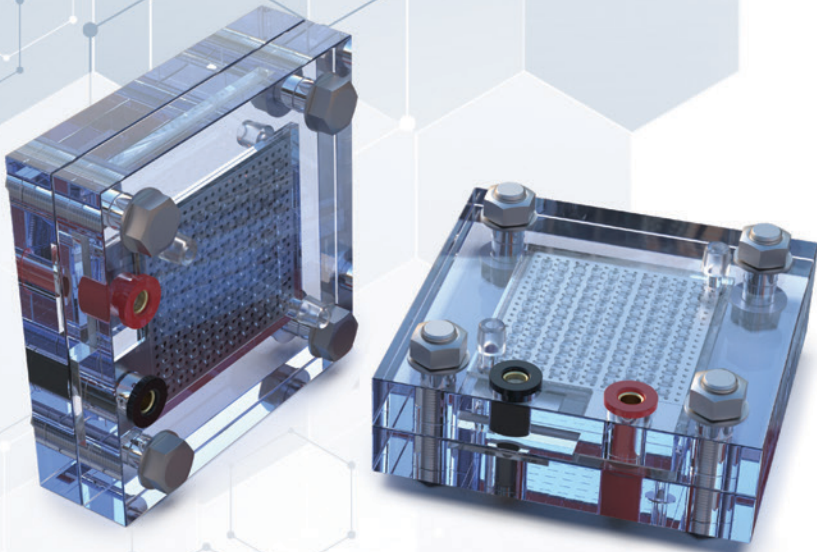


**HERNON**<sup>®</sup>  
*Formulating Solutions*

# FUEL CELL PRODUCT GUIDE





Hydrogen is the most abundant element in the universe - an exhaust-free, non-toxic energy source which can be stored indefinitely, providing energy and security.

Fuel cells convert hydrogen into energy using a chemical reaction rather than combustion, producing only water and heat as byproducts which is an ideal source for transportation and stationary applications. PEM fuel cells are particularly suitable for use in vehicle applications, such as cars, buses and heavy-duty trucks.

The transportation industry has embraced the use of fuel cells to produce hydrogen-combustion engines offering longer range than the standard EV vehicle which does not require charging – saving time and infrastructure costs for both manufacturer and consumers alike. A viable energy alternative to fossil fuels - fuel cells are the next generation in alternative energy.

Heron is proud to offer our lines of products to assist you in joining the growing number of manufacturers who have embraced this new technology to provide a safer, cleaner environment while reducing carbon emissions worldwide.



# ADHESIVE & SEALANT PRODUCTS

**TUFFBOND® 394** is a single component, high temperature resistant, heat activated epoxy. It cures to a high-performance thermoset system with excellent adhesion properties to a wide variety of substrates.

Color	Viscosity	Shear Strength: Steel
Amber/Yellow	44,000 - 56,000 cP (@ 25°C)	2000-3500psi



**SILASTOMER®** is a high performance, single component, ready to use adhesive / sealant. It has a pastelike consistency, which cures to a tough, resilient and durable silicone rubber when exposed to moisture in the air. **SILASTOMER®** will adhere to clean metals, glass, most types of wood, silicone resin, vulcanized silicone rubber, natural and synthetic fiber, ceramic, many plastics and painted surfaces. It provides excellent resistance to moisture, weathering, vibration, ozone and extreme temperatures.

Grade	Color	Temperature Range C°
333	Clear	-56° ~ 204°
334	White	-56° ~ 204°
336	Black	-56° ~ 204°
340	Red	-46° ~ 260°
343	Black	-56° ~ 204°



**HPS - HERNON POROSITY SEALANTS** is the solution to leak proof parts, improving machinability, in addition to increasing the durability and surface quality for painting and plating. HPS is also excellent for sealing leak paths in rigid electronic assemblies. The hardened resins exhibit superior chemical resistance and elevated temperature stability. Sealed powdered metal parts exhibit better machinability, enhanced tool life and better dimensional control.

Grade	Color	Viscosity @ 25°C, cP
990	Clear	10 ~ 30
994	Clear	5 ~ 15
41814	Amber	5 ~ 10
59801	Amber	30 ~ 45



**HPS - HERNON POROSITY SEALANT SURFACTANT 381001** is a single component product designed to be used as wetting agent.

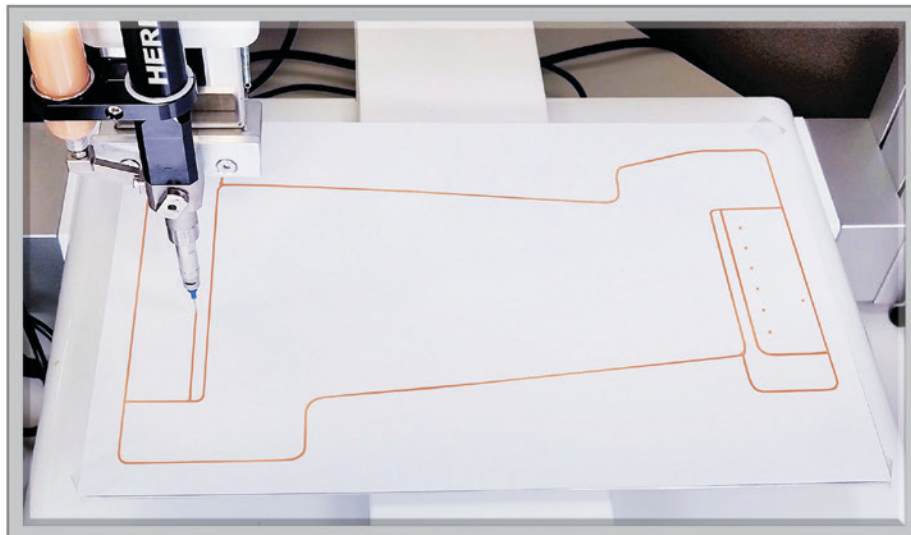
Color	Viscosity	Flash Point	Surface Tension
Pale Yellow	200 ~ 300 cP (@ 25°C)	251°C	33 (@ 25°C)

# APPLICATION ROBOTS

Heronon offers a full lineup of automated dispensing solutions to meet the production needs of manufacturers large or small. These systems are easily programmable and come with many standard and customizable options to be as efficient and effective as possible.



Scan for  
video



## BENEFITS OF IMPREGNATING FUEL CELL GRAPHITE PLATES

The fuel cell stack is the heart of a fuel cell power system. It generates electricity in the form of direct current (DC) from electrochemical reactions that take place in the fuel cell. A single fuel cell produces less than 1 V, which is insufficient for most applications. Therefore, individual fuel cells are typically combined in series into a fuel cell "stack." A typical fuel cell stack may consist of hundreds of fuel cells. In its simplest form, a fuel cell is two electrodes - the anode and the cathode - separated by a catalyst-coated membrane. A fuel cell stack is made up of many PEM fuel cells that are stacked together, like slices in a loaf of bread.

Manufacturers of fuel cell stacks carefully select and test sealant materials to ensure the reliability and safety of their products. Heron realizes the importance to use sealants that are compatible with the materials used, as well as with the operating conditions, temperature ranges, and hydrogen gas exposure.

Impregnation resins are often used in the manufacturing and preparation of hydrogen fuel cell membranes. These resins play a crucial role in enhancing the performance, durability, and stability of the membranes used in fuel cells. Impregnation resins are designed to penetrate the membrane material and provide various benefits such as improved mechanical strength, chemical resistance, and water management.

Created within our in-house laboratory, Heron resins offer compatibility and adhesion, reinforcement, mechanical stability, enhanced water management, chemical resistance, and reduced gas crossover. We can also customize your resin to your exact specifications at any time. Heron offers over 5000 distinct formulations for anaerobic adhesives, cyanoacrylates, epoxies, acrylics, UV curing adhesives, and sealants. We also provides equipment and precision dispensing systems for precise and effective application of our adhesives and sealants.



## CORPORATE INFO

**Hernon Manufacturing, Inc.**® produces high performance adhesives, sealants, precision dispensing valves/ systems and UV LED curing lights. Hernon maintains a library of over 5000 unique adhesive and sealant formulas in addition to developing customized formulas to address specific manufacturing challenges. A full in-house chemical laboratory ensures quick turn around on testing and developmental projects in addition to an on-site machine division which allows Hernon to build, service and integrate unique dispensing systems to even the most exacting specifications. This horizontal integration helps Hernon provide customers with a Total Solution for any unique application.

Hernon Manufacturing is headquartered in Sanford, FL. and maintains an ever-expanding network of over 100 distributor and partner locations around the globe. Already shipping to over 60 nations, Hernon can provide adhesive solutions to manufacturing operations anywhere in the world.

Hernon's objective is to continuously improve our products and services to meet our customer's needs. We are committed to the efficient delivery of quality products worldwide.

Visit [www.HERNON.com](http://www.HERNON.com) for more information



**HERNON®** Headquarters ~ Sanford, FL.