



Choosing the Right Stuff

The use of rubber is pervasive in everyday life, from rubber bands and rubber gloves, to wellingtons and wet-suits. How can one ingredient like rubber, be used in so many different ways? What most people don't realize is that there are many different types of rubber, each with their own special set of properties that make them more or less appropriate for different uses.

The two basic categories for what we all know of as "rubber" are natural and synthetic. Natural rubber is made from latex, which is a plant based substance. Many plants, including dandelions, are capable of producing latex in varying amounts.

Synthetic rubber is made in chemical plants from a petrochemical base. Though chemically unrelated, both share similar performance characteristics. The major upside to synthetic rubber is that it can be manufactured.

Silicone rubber, which is APM Hexseal's primary elastomeric material, falls into the synthetic category.

Did You Know?

Working in conjunction with the U.S. Department of Defense during, and just after, World War II, APM Hexseal discovered that silicone polymers could be used to resolve harsh environmental sealing issues experienced by electromechanical switches and circuit breakers. The joint effort to explore and implement a silicone polymer solution resulted in a new specification, MIL-DTL-5423 (formerly MIL-B-5423), that is in use today.

APM Hexseal obtained numerous patents for environmental seals for toggle, pushbutton, rocker and rotary style switches and potentiometers, and for lever, toggle and pushbutton circuit breakers. Recognizing the need for a transparent cover that also offered natural tactile feel, APM Hexseal engineers developed their exclusive RUBRGLAS® formulation for applications that require the ability to view actuator statuses and lighted indicators.



Raw Elemental Silicon

What makes APM Hexseal different?

We at APM Hexseal employ careful sourcing controls to ensure that the silicone we use has high integrity, containing no fillers or recycled silicone (a practice that is sadly common in the industry). Our focus on silicone integrity enables our products to consistently perform to high standards.

In fact, APM Hexseal has produced more silicone sealing boots than all of our competitors combined - all with consistent performance characteristics that meet our customers' needs.

Our core mission at APM Hexseal is to provide sealing solutions that function in the world's most hostile environments, which means that we have explored different types of elastomeric materials in order to understand and improve the performance characteristics of our products.

As such, the elastomeric materials we offer for our products can be changed depending on the intended use or environmental conditions - whether there might be exposure to extreme high or low temperatures, oils, chemicals or solvents, and even sunlight, oxygen, or ozone. Other factors to consider are abrasion resistance, elongation percentage, and compression.

Below is a list of our different sealing elastomers for Sealing Boots and Bushings along with their special characteristics.

Material Name	Service Temp.	Tensile PSI	Elongation %	Abrasion Resistance	Compression Set
Silicone	-103°F to +400°F -75°C to +204°C	500-1800	100-800	A	A
FluoroSilicone	-70°F to +392°F -57°C to +200°C	600-1400	100-700	C	A
Buna N (Nitrile)	-22°F to +212°F -30°C to +100°C	1500-3000	400-600	A	B
Neoprene	-40°F to +257°F -40°C to +121°C	1500-4000	100-700	B	C
EPDM (Ethylene Propylene)	-60°F to +300°F -51°C to +149°C	1400-1600	500-600	B	A

KEY	
A	→ Recommended
B	→ Fair / Satisfactory
C	→ Acceptable / Poor
U	→ Unsatisfactory

Ask an Expert

We, at [APM Hexseal](#), are available to help you determine the best solution for your application. Please [contact us](#) if you have questions or need to address a specific situation.

More News!!!

Check out our newly designed and updated [website](#) at www.apmhexseal.com which contains the latest information about [APM Hexseal](#) and our products. Mobile site coming soon!

**"COMPLETE SEALING SOLUTIONS.
TOTAL CUSTOMER SATISFACTION."**

Accept no substitutes!

Look for more product innovation from [APM Hexseal](#) in the future!