Unlock the Possibilities of Silicone Rubber

Silicone is an incredibly versatile material. To unlock the range of possibilities and benefits offered by silicone elastomers, the keys are custom formulation and mixing.

At HEXPOL, we’re re-introducing true custom mixing for silicone rubber compounds. That means dedicated resources, equipment, and custom recipe development to provide silicone rubber with the right properties for your application.

We leverage our heritage in organic rubber compounding, defined by industry-leading innovation, to provide comprehensive silicone rubber products and services. In addition to custom mixing, HEXPOL has a product line of standard silicone compounds. Or, if you already have your own formulation, we’ll mix that and deliver a precise compound, ensuring batch-to-batch consistency.

Silicone Elastomer Properties

- **Weathering/Age Resistance** – Because of its durability, silicone is able to withstand extremely harsh conditions and environments, resisting water, moisture, and steam.
- **Thermal Stability** – At extreme temperatures silicone can be far superior to most conventional rubbers. It can operate normally in a broad range from about -75°C (-103°F) to +300°C (572°F). When operating at moderate temperatures, silicone rubbers provide a potentially unlimited operating life.
- **UV Resistance** – Silicone resists ultraviolet light or sunlight, is oxidation resistant, and maintains surface color that won’t fade.
- **Low Volatility** – Refers to a material’s tendency to vaporize. Silicones that maintain a desired, lower vapor pressure are less apt to vaporize. They retain softness indefinitely.
- **Electrical Insulation Properties** – Excellent. Silicone is flexible and retains its insulation resistance, dielectric strength, and power factor throughout its entire temperature range.
- **Elasticity, Pliability and Flexibility** – Silicone has strong mechanical properties. It can be hard and brittle or soft and flexible. High tear and tensile strength, elongation properties, and a durometer range of 5 to 80 Shore A. Low rotation energy around the Si-O bonds allows the backbone to coil and be uncoiled.
- **Microbial Resistance** – Outstanding biocompatibility, silicone is odorless and tasteless, and can be formulated for medical products.
HEXPOL Understands Customer Requirements for Recipe Development

HEXPOL has silicone technical specialists and field service representatives who listen to what customers need. Because of silicone’s flexible chemical structure; ability to restore its original size and shape after being stretched, compressed, and twisted in demanding applications; our chemists can modify and improve its properties and enhance its performance to meet an array of functions in thousands of applications, in nearly any industry around the world.

Using our Request For Quote (RFQ) process, we collaborate with customers to determine whether they need us to develop a custom formulation, use one of our existing formulas, or use their recipe for mixing.

We gather information that helps deliver the right silicone solution, such as:

- **Specification/Physical Requirements** – Characteristics such as hardness, color, tensile, elongation, conductivity, high and low temperature limits, and fluid resistance; as well as specifications (e.g., military, automotive) and industry standards.
- **Customer Process for Curing** – Injection, compression, extrusion, etc., as well at process parameters such as time, temperature and line speed.
- **Physical Forms of Compounded Product** – Continuous strips or slabs, preforms and pigs-rolls.
- **Application** – What will the part be used for?

HEXPOL chemists and technical specialists use this information to modify the chemical structure of silicone rubber to achieve the exact properties needed for the application. Working with our customers, we continue to discover new applications for silicone polymers.

HEXPOL is Your Single Source for Compounding

HEXPOL is already the number one provider of custom rubber, performance additives, thermoplastic and TPE compounds. Turn to us for the best silicone rubber compounds, technical service, and field support that our customers expect from HEXPOL.

We’re your single source for silicone and organic rubber compounding:

- **Silicone, Fluorosilicones, and all Types of Silicone/EPDM Compounds**
- **Formulary with Hundreds of Compounds for Multiple Silicone Applications**
- **Silicones Pigmented to Almost any Color, Including Black, from Translucent to Opaque**
- **Strategic Raw Material Sources and Purchasing Relationships**
- **Compounds that Meet Typical Silicone Specifications & Standards**
- **Fully Automated Process System in our 9001: 2008 Certified facility**
- **A2LA Accredited (ISO/17025:2005) Burton, Ohio facility—The highest accreditation in the rubber industry**
HEXPOL field technical service representatives are among the best in the world. Together, they have seven U.S. patents and seven foreign patents in polymer bonding/chemistry. Their mission is to consult with customers, analyze processes, and provide personalized service that matches the product with the process.

**Know How. Know Why.**

**Investing in People Fosters Excellence** – We continually invest in their expertise through technical training and leadership programs. Whether they are polymer chemists, industry experts, technical sales or customer service representatives, we strive to elevate customer satisfaction and on-target solutions.

**Know How. Know Why.**

**HEXPOL Values the Process** – Our field representatives align HEXPOL’s process with the customer’s process to achieve product specification requirements that help ensure end product excellence. A process with stability, reliability, and repeatability is a predictable process that consistently produces the right product.

**Know How. Know Why.**

**The HEXPOL Technical Visit** – We can conduct periodic and confidential on-site reviews, observing and analyzing attributes such as equipment, operator activities, and production processes to solve problems, increase productivity, and improve product quality. HEXPOL brings value to each and every customer relationship.

**Know How. Know Why.**

For more information on HEXPOL visit our site HEXPOLCompounding.com or call 440.682.4039.