

TIRE-TOLL COMPOUNDS



Where You Need Them...When You Need Them

 **HEXPOL**
COMPOUNDING

A Material Difference

A LEGACY OF EXCELLENCE

HEXPOL is a leading global developer and manufacturer of quality rubber compounds. Our rich heritage is defined by innovation and customer collaboration. HEXPOL scientists and technologists are among the best in the world, providing proprietary compounding solutions that address our customers' evolving needs.

From automotive and transportation to oil & gas, medical, industrial, tire-toll, and consumer applications, HEXPOL is committed to delivering value and improving the products our customers make. We have eleven locations in North America, including legacy names such as Gold Key Processing, Burton Rubber Processing, Colonial Rubber Works and Chase Elastomer.

HEXPOL NAFTA locations position us to leverage our capabilities to serve locally, ensuring optimum resources for any compounding need and personalized service to customers of all sizes, wherever they are. In North America, we have nearly 30 mixing lines, six mixing mills and more than 440,000 metric tons of working capacity annually.

HEXPOL capabilities include:

- **Rubber Compounding – Custom mixing and formulation development**
- **Rolls – Expertise across a range of rubber roll applications**
- **Specialty Products – A comprehensive line of custom and standardized performance additives and color concentrates**
- **Tire-Toll – Large-volume mixing for tread, sidewall, coating stocks, bead, inner liner, bladder, Apex stock and non-black compounding**
- **TPE Compounding – Combining the best characteristics of thermoset rubber with the processing advantages of thermoplastics**
- **Outsourcing Services – Delivering strategic, operational, and financial advantages to our valued customers**

HEXPOL legacy brands expand our global footprint, strengthen our technology leadership, and optimize our already superior customer service.

HEXPOL AB is one of the world's leading polymer groups.

Based in Malmö, Sweden, HEXPOL has a global footprint with manufacturing facilities strategically located to serve customers across North America, Europe, and Asia. HEXPOL is a US \$1 billion + a year business with 3,300 employees in ten countries. HEXPOL is a public company traded on the Nordic Stock Exchange.



CUSTOM FORMULATED TIRE-TOLL COMPOUNDS



HEXPOL's Tire-Toll professionals and their industry-leading capabilities are there for you when you need them. Our ability to manage and deliver quick turn-around with emergency compound volumes exceeding 500,000 pounds per day is what we're known for.

Customers often ask us,

“How soon can we mix?”

Our immediate response is

“How soon can you get us the raw materials?”

For over 40 years, we have proudly partnered with the tire industry. Whether it's for cars, trucks or buses, airplanes, mining, off-highway vehicles, or non-pneumatic solid tires, we can do the compounding you need.



But that's only part of our story.

Other examples of HEXPOL's breadth of technology and tire-toll experience include prototyping formulations in batches as small as 100 pounds for custom compounds, and our proprietary silanization process for new-generation tires. These compounds include silica and silane as part of the recipe design.

HEXPOL delivers the tire-toll compounds you need – where you need them, when you need them.

Technology

HEXPOL has some of the most advanced processing lines in the industry. Our investments in automation and proprietary process control systems ensure precise material weighing, lot traceability, and batch-to-batch consistency, as well as master recipe control and maintenance. Machine instruction systems greatly reduce operator influence and guarantee batch-to-batch consistency. Integrated computer systems facilitate standardization of manufacturing and testing at all HEXPOL production locations.

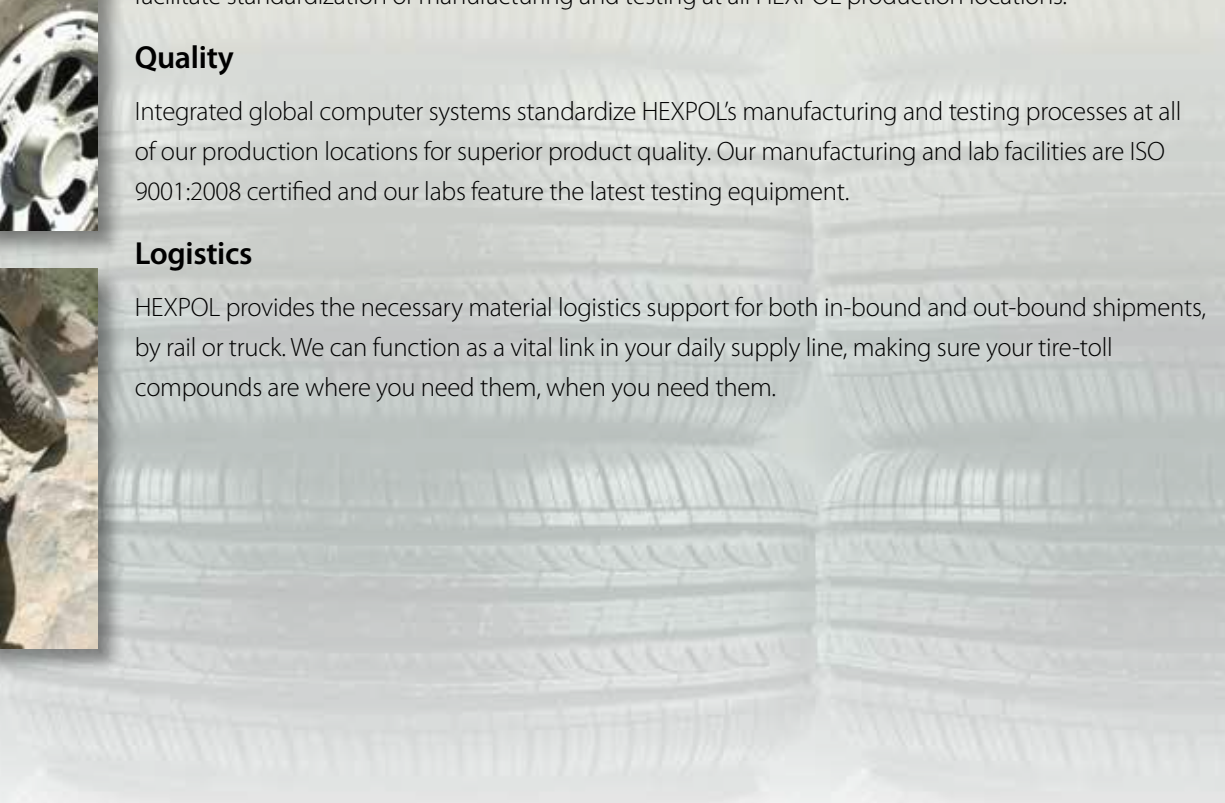


Quality

Integrated global computer systems standardize HEXPOL's manufacturing and testing processes at all of our production locations for superior product quality. Our manufacturing and lab facilities are ISO 9001:2008 certified and our labs feature the latest testing equipment.

Logistics

HEXPOL provides the necessary material logistics support for both in-bound and out-bound shipments, by rail or truck. We can function as a vital link in your daily supply line, making sure your tire-toll compounds are where you need them, when you need them.



Tire-Toll With HEXPOL Today

Meeting demand and maintaining quality can be expensive when you consider dynamic schedule changes, scrap, lost labor time, machine and utility costs. Eliminate these monetary drains and harness predictable throughput with HEXPOL's tire-toll processing and mixing excellence.

Equipment Versatility

HEXPOL production lines at our six NAFTA tire-toll compounding locations feature mixers with 2-wing and 4-wing tangential motors, plus numerous units with intermesh rotor technology.

Our production sites are designed to accept multiple delivery forms of carbon black and plasticizers, from bags, super-sacks, totes, and drums to trucks and rail. HEXPOL delivers multiple strips, from 1.5 inches to 36 inches, in a variety of packaging options.

■ Mixer chamber sizes: 45, 75, 90, 220, 258, 270, 312, 440, and 620 liters

■ Downstream equipment includes:

- Single Mill
- Tandem Mills
- Single Barrel Extruder
- Twin Screw Roller-Head Die Extruder
- Gear Pumps

■ Variable-Speed Mixers

■ Variable-Speed and Variable-Ratio Mills

■ Complimentary Ancillary Equipment:

- Calenders
- Strainers
- Gear Pumps

SPECIALTY PRODUCTS FOR THE TIRE INDUSTRY

HEXPOL develops custom-formulated and standardized specialty products and additives for the tire industry, including dispersions or blends of accelerators, vulcanizing agents, resins, bonding agents, colorants, process aids, softening agents, antioxidant and antiozonant materials, as well as tire mold lubricants.

From product development and materials formulation to process enhancement and quality assurance, our technical support experts are ready to tailor specialty product additive and colorant systems to your specific requirements.

Product Types and Capabilities

Accu-Way®—A certified, multi-component powder blend, Accu-Way pre-weighed, packaged chemicals are carefully blended (essentially, a pre-weighed Redimix™ as described below), weighed and heat-sealed in a low-melt batch inclusion bag.

Desi-Cal®—Calcium oxide acts as a moisture scavenger in rubber applications. Desical P, an industry standard, protects the calcium oxide from premature hydration. Desical P is available in 10-pound pre-weighed or custom packages.

DSC® Silanes—Liquid silane coupling agents, absorbed on a high surface area carrier, link the filler to the polymer to improve physical properties. DSC increases the modulus without significantly affecting other compound properties.

Lubrex®—These tire lubricants are a series of semi-permanent lubricity/release coatings. Lubrex BTC products are designed for use on butyl rubber bladders in tire-curing presses.

Mastermix®—Single- and multiple-component dispersions designed to meet customer-specific compound requirements, providing an optimum balance of compatibility and dispersion to fit the application.

Polybound®—A unique, encapsulation technology designed for rapid incorporation, these polymer-bound powders are single- or multi-component, high activity products that use a widely compatible, saturated polymer binder system.

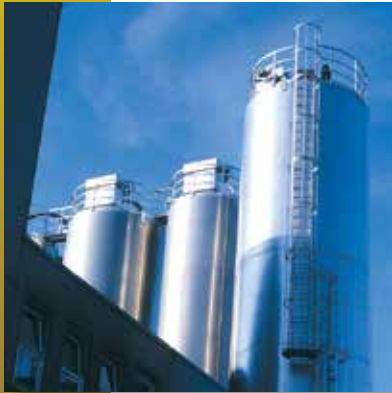
Redimix®—Oil-treated powders provided by Redimix enhance process and product uniformity. Compared with dry powders, Redimix is cleaner to handle and easier to weigh.

Stan-Mag®—Magnesium Oxide that provides excellent scorch safety for chlorinated polymers.

VVO®—HEXPOL's VVO (Vulcanized Vegetable Oil) products act as permanent softeners, complementary fillers, surface modifiers and thixotropic process aids. Our technical staff continually formulates new grades and uses for vulcanized oils in modern processes.

Mastermix® Colorants—Available in polymer-bound, dry colors, and other forms, HEXPOL offers a wide range of stock colors, or we can supply a custom color match for your application.





A Legacy of Excellence

HEXPOL has a rich heritage in custom rubber and TPE compounding defined by industry-leading innovation. Proudly serving our customers with global reach and local service, HEXPOL's technical team partners with customers to:

- **Develop custom solutions**
- **Provide access to quality materials**
- **Deliver technical support to meet evolving needs**

HEXPOL provides its customers with access to our worldwide resources to deliver their competitive advantage – through technology and service.

For more information about our legacy brands and world wide resources visit hexpolcompounding.com or call **440.834.4644**.



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