### **TECNOELASTOMERI**

Engineering Urethane Elastomers





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### About Huntsman

Huntsman Corporation is a publicly traded global manufacturer and marketer of differentiated and specialty chemicals with 2018 revenues more than \$9 billion. Our chemical products number in the thousands and are sold worldwide to manufacturiers serving a broad and diverse range of consumer and industrial end markets. We operate more than 75 manufacturing, R&D and operations facilities in approximately 30 countries and employ approximately 10,000 associates within our four distinct business divisions. For more information about Huntsman, please visit the company's website at www.huntsman.com.

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### Global elastomers experts

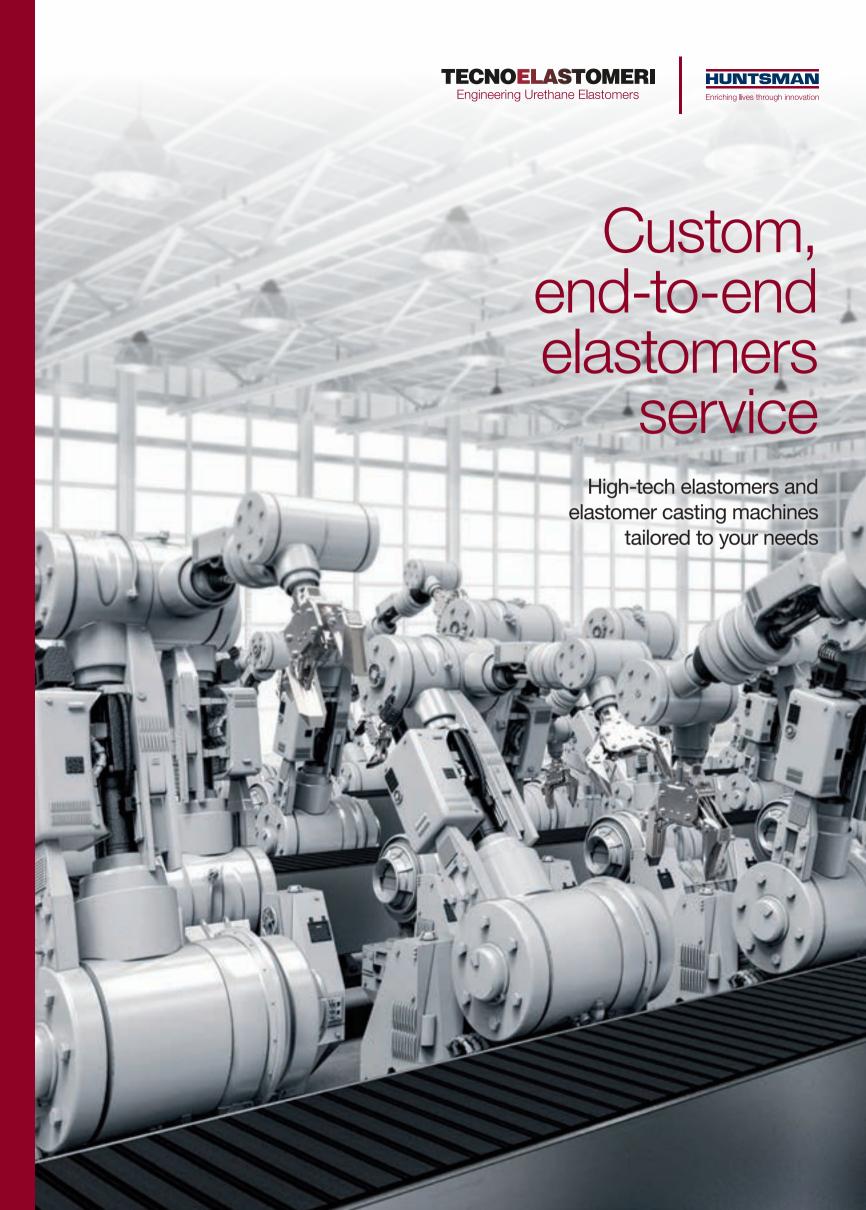
### **Protecting connections**

Committed to customers: We build partnerships with our customers and work across an international network of R&D and manufacturing locations to help solve complex challenges and deliver the highest levels of technical support and customer care.

Committed to quality: Wherever we are, whatever we're doing, we are always rigorous about quality control, quality assurance, and make a point of prioritizing environmental, health and safety protection.

Committed to innovation: We keep pace with the most innovative trends in plastics processing by using the latest equipment and making regular investments in our formulation, manufacturing and R&D capabilities.

Committed to sustainability: We create solutions that contribute to a more sustainable society by helping to conserve energy, preserving natural resources and reducing our overall carbon footprint.





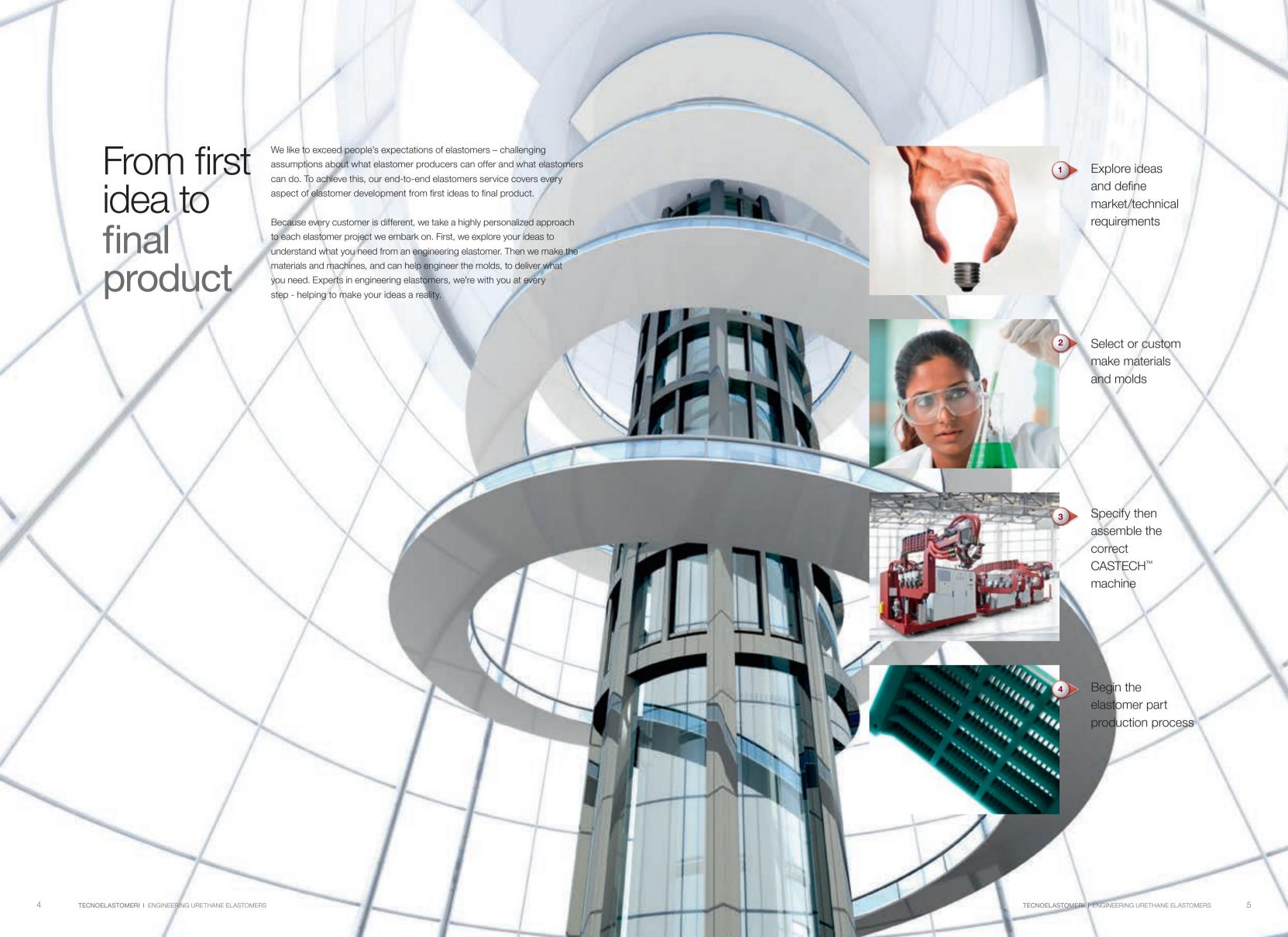
# Everything you need in engineering elastomers

Huntsman Tecnoelastomeri is one of the world's leading manufacturers of high-tech elastomers and elastomer casting equipment. As part of the global specialty chemical company Huntsman, we offer everything you'll ever need when it comes to selecting and processing hot-cast engineering elastomers.

Very few companies provide what we do – a bespoke, end-to-end elastomers service.

Under our TECNOTHANE® brand, we provide a wide range of off-the-shelf and custom-made hot-cast engineering elastomers. These innovative materials are used to create durable wheels, seals, rollers, pads, sheets and other technical parts for industrial, manufacturing and transportation applications. We make our own CASTECH™ machines for the efficient processing of polyurethane elastomers and microcellular elastomer foams. We also provide a 360 degrees scientific support service for customers that need help evaluating or working with elastomers.

Whatever your engineering elastomer needs, we'll find your perfect match of materials and machinery.



## Defining possibilities. Matching expectations. Research and Innovation



To enable us to recommend the right elastomers and correct casting equipment, we've set up our own Research & Innovation Department. Dedicated to advancing the development and application of polyurethane-based engineering elastomers, this specialist facility helps us study the science behind customer concepts and pinpoint the perfect products.

Our global research and innovation department is extensively equipped with testing apparatuses and staffed by scientists who are experts in:



- Rheological analysis
- Fourier transform infra-red spectroscopy (FTIR)
- Differential scanning calorimetry (DSC)
- Size exclusion chromatography (SEC)
- Nuclear magnetic resonance (NMR)
- Thermogravimetric analysis (TGA)Plus many other disciplines.



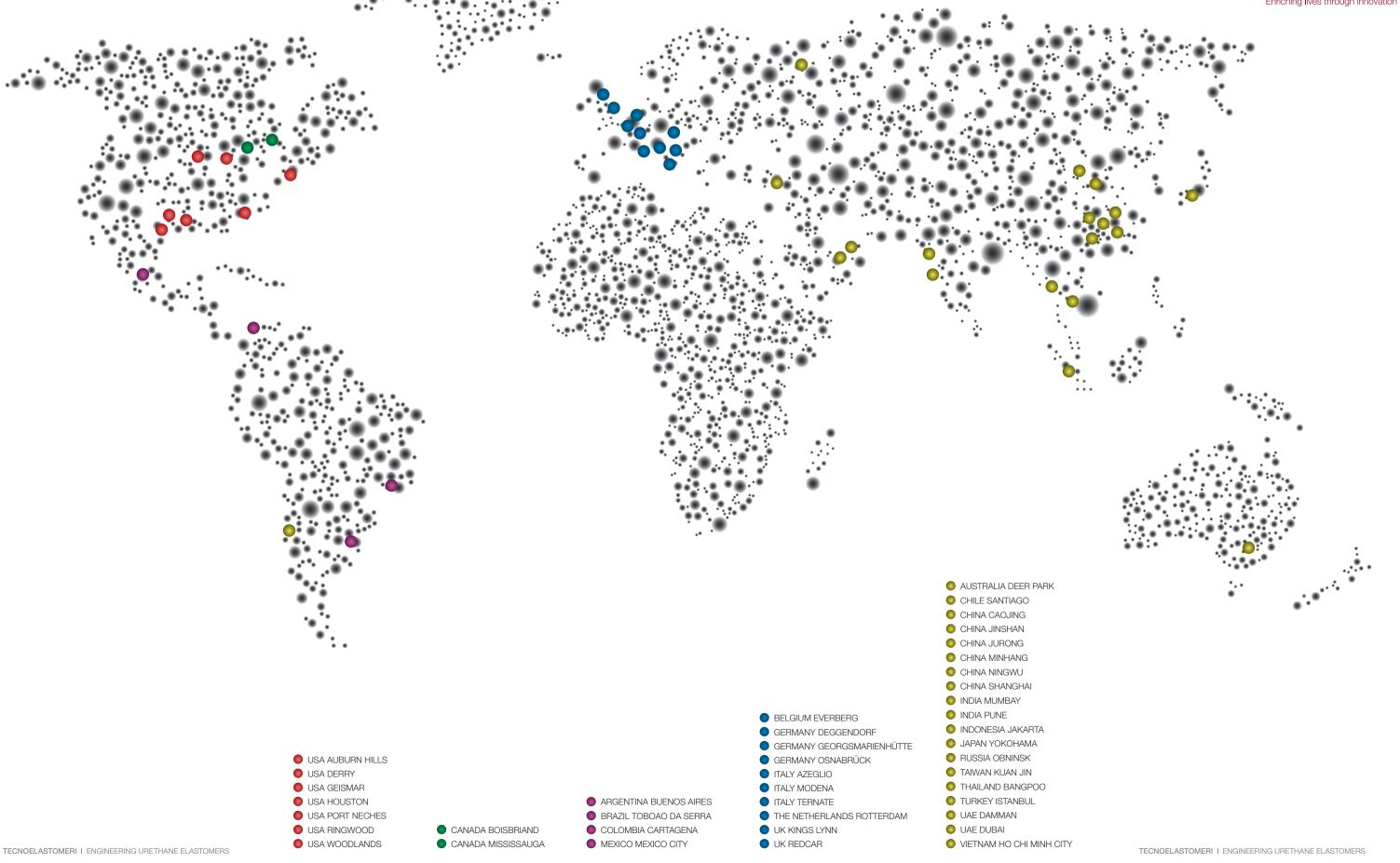
We've also installed CASTECH™ machines at technical centers in Belgium, China, and the USA. This investment puts our procuct research and prototyping capabilities closer to our customers and increases opportunities for us to work together on collaborative, elastomer-based, innovation projects.

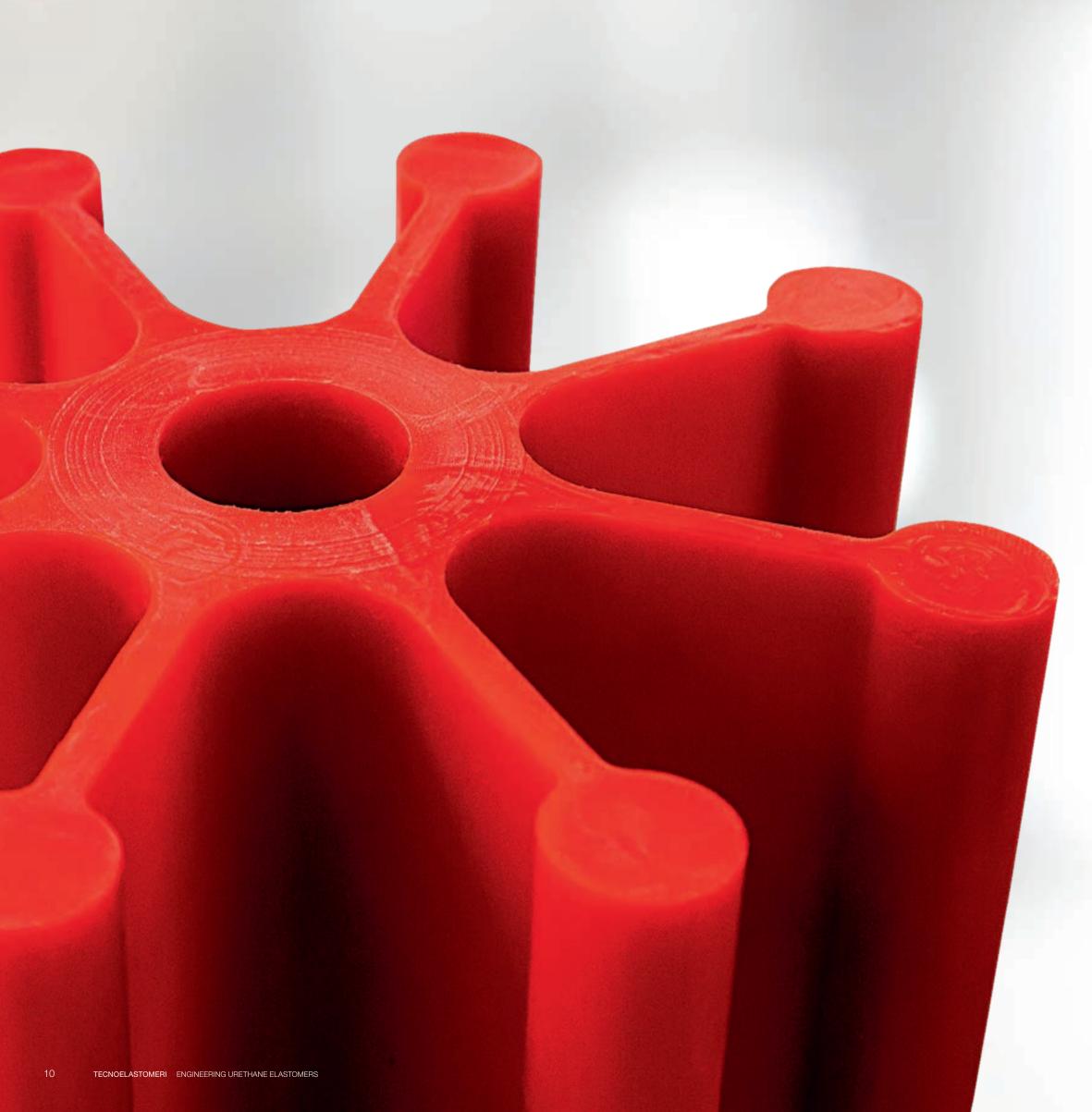


### A world of expertise – focused on your needs

As a major, global supplier to the elastomers industry, we'll be there whenever you need us - wherever your production base and whatever your target market. Worldwide our network of systems houses, manufacturing hubs and technical centers spans all regions, with sites strategically located to ensure our elastomers expertise and our people and products are close to our customers.







# Create unique products, with unique elastomers

Your ideas are the starting point for our formulation work and the first step in finding you exactly the right kind of engineering elastomer. Once we know what you want to achieve, we can discuss the extensive formulation options available via our TECNOTHANE® product range.

TECNOTHANE® is an advanced portfolio of polyurethane-based, hot-cast, engineering elastomers, which includes a full range of polyols and chain extenders. Over the years we've blended these raw materials together, in different combinations - creating a suite of tried and tested elastomer formulations that we market as our MPC, MDE, MPT, SWP, WRP and V-TER product families.

Proven to perform, these standard products are easy to process and provide good chemical resistance and excellent mechanical characteristics. Often these off-the-shelf solutions will satisfy our customers' needs. But if not, don't worry. We can work together to make you something unique.





Your best choice for any kind of polyurethane solution

## A total product solution for total satisfaction CASTECH<sup>™</sup> machines



We branched out with the development of CASTECH™ machines in 2002. After many years in the industry, we saw a gap in the market and knew there was an opportunity to create a better kind of high-precision casting machine. Using our knowledge of elastomer properties, we designed a piece of equipment that would work in complete harmony with our TECNOTHANE® systems – getting the very best out of our materials. Naturally, we were careful to also design a solution that would be compatible with TDI, NDI and other polyurethane platform technologies, including technical foam.

The result is CASTECH™ – a flexible, low maintenance equipment solution, that can be used to efficiently cast compact

polyurethane elastomers and microcellular elastomer foams from all types of isocyanate and chain extender combinations. Offering the highest levels of accuracy and flexibility, our CASTECH™ machines are among the most advanced equipment options available for the efficient manufacture of elastomers. Featuring a range of interchangeable parts, CASTECH™ machines are fully flexible and can be tailor made to suit customer requirements. As standard, they provide precision dosing with good mix homogeneity, a high output and precise shot casting capabilities. Each machine also comes with its own software package for monitoring performance variables and making adjustments during the manufacturing process.



### A total product solution for complete satisfaction

Our engineering elastomers and casting machines are used across industry to create components and technical parts for a range of applications. In general, manufacturing our materials make a difference to the performance of parts in hydraulic, robotic and conveying equipment - supporting the growth of smart factories and automation. Our elastomers are also widely used in specialist market sectors from mining and metalworking to the automotive industry. Enclosed you'll find a series of leaflets about the application potential of our materials and machines.