

### Materials. Powering Ideas.





Our company was founded on a unique combination of strong capabilities – marketplace and technology leadership, world-class production assets, and ingenuity. Our global reach and resources span a variety of disciplines, enabling us to serve a wide range of end markets including automotive, building and construction, carpet, consumer electronics, consumer goods, electrical and lighting, home appliances, medical, packaging, paper and paperboard, and tire and rubber goods.

Trinseo has a long-standing legacy of unrivaled customer relationships with the world's leading companies, based on our technical know-how and dedication to help them meet any challenge. Building on more than seven decades of manufacturing, commercial, and technological expertise, we are passionately focused on delivering high performance products and innovative thinking to our customers.



- The number one global supplier of styrene butadiene latex
- One of the world's largest suppliers of polystyrene
- More than 70 years of technology and marketplace leadership

- More than 2,100 employees in 27 countries across the globe
- Unmatched global scale and geographic reach with 19 manufacturing locations around the world

# We **Deliver**What We **Promise**

Our customers trust us because we deliver what we promise. And that's because our resources are in all the right places, starting with 19 manufacturing sites located strategically around the world. Our unmatched global scale and broad geographic reach give us the ability to respond quickly and efficiently to the marketplace's changing needs and help our customers to capitalize on growth in emerging geographies.

Trinseo has a world-leading position as a global supplier of our two flagship products – polystyrene and styrene butadiene latex. And our product development pipeline is similarly robust, as we develop new material grades to meet emerging performance requirements, along with innovative technologies and applications.

Our greatest asset, however, is our people. We continue with the same global world-class team our customers have come to trust. A talented team of more than 2,100 employees with strong and unique technical knowledge, experience, and application expertise – fully dedicated to keep our customers at the forefront of their industries.

We're everywhere we need to be to serve our customers today, and everywhere our customers say they're going in the future.



# Extensive Research and Development Capabilities

At Trinseo, our research and development and marketing network prides itself on working closely with our customers, ensuring that research and innovation are driven by what's needed in the marketplace. Our technical leaders are highly experienced, many with over 20 years of experience, combining expertise in their fields with intimate knowledge of our customers' industries and applications. Through decades of cultivating relationships, our customers count on us to help them meet their most complex material challenges.

#### **Worldwide Manufacturing Assets**



**Plastics:** Trinseo has research and development and testing laboratories worldwide: Terneuzen in The Netherlands; Midland, Michigan, in the U.S.; Limao, Brazil in Latin America; Hsinchu in Taiwan; and Tsing Yi in Hong Kong.

**Latex:** Trinseo has four paper testing laboratories: Midland, Michigan, in the U.S.; Sao Paulo in Brazil;

Samstagern in Switzerland; and Shanghai in China, as well as two pilot coating facilities. We also specialize in product R&D for latex, both in Midland, Michigan and Rheinmuenster, Germany.

**Rubber:** Our world-class R&D facility is based in Schkopau, Germany.

### Our Customers Dream We Make Dreams Work

Every day we challenge our customers to bring us their best ideas – from the little ones that might solve a nuisance to the big ones that could change the world. Our customers do business with us because we help them solve their most complex material challenges, enabling them to think bigger and invent better. We work with them to make their ideas a reality, by incorporating a broad range of innovative and advantaged plastics, latex, and rubber technologies into their products that serve many essential consumer applications.

At Trinseo, we believe anything our customers want to do should be in reach. It's our job to deliver technology solutions better, smarter, and faster. To make the impossible suddenly and seamlessly possible.

We deliver solutions like high performance rubber that reduces rolling resistance in tires without reducing traction for a safer journey and better fuel economy; or tailored polycarbonate-based compounds that diffuse light in LED lighting applications.

Our Commitment to Our **Customers' Success** Runs Deep

A majority of our customer relationships exceed 20 years. We stay with them throughout the life cycle of their product as design and functional requirements change over time.



## **The Future** Is Ours to Create

We're ready to tackle any challenge – including the challenge to protect people and our planet. That's why we are continually working with our customers to develop solutions to make their products safer and more sustainable, such as medical grades of polycarbonate that enable sterilization of surgical instruments, and new grades of polystyrene that allow for greater downgauging of refrigerator liners.

But our commitments go beyond our applications to our operations. We are fully dedicated to the principles of Responsible Care,® the chemical industry's global voluntary initiative related to safe and sustainable operations and product stewardship.

# Committed to Our Communities

Trinseo is committed to the people and communities where we live and operate. An important part of that commitment is our impeccable safety record, one of the best in the industry. Our presence in our communities is a source of economic stability and growth, from investments in facilities to creating jobs that stimulate the economy.

We also believe in giving back. Our company is actively involved in community giving, and our employees contribute countless hours of their own time to make their communities better places.



## A History of **Innovation**

Our track record is built on a history of customer-driven innovations, and we continue to fuel our future pipeline with new opportunities.

Latex and Rubber First industrial production of synthetic rubber

Dow develops styrene butadiene latex polymer (styraloy) Functionalized solution styrene butadiene rubber (SSBR) for high performance tires

Multi-layer curtain coating (MLCC) for paper and board coating applications

Foam latex: ENVERSA® technology

High performance styrene acrylates

Starch emulsion technology

Performance latex applications: adhesives, construction, consumer products

SSBR microstructure optimization. Third generation functionalized SSBR for "green tires" with lower rolling resistance

Functionalized Nd-BR rubber for high performance tires

Rubber-filler masterbatch technology

1937-1989

1990-2009

2010-Future

#### **Plastics**

Dow introduces polystyrene (PS) to the U.S.

PS technology is leveraged to invent Mass ABS process technology

Two-phase interfacial polycarbonate process is invented

STYRON A-TECH™ resins for appliances, consumer electronics, and packaging and becomes PS technology leader in these applications

PC/ABS blends for broad market use, including automotive and consumer electronics New PC-based compounds for automotive interiors and exteriors: low gloss, light weight, durable aesthetics

High performance structural materials to replace steel and make cars lighter and more fuel efficient

New HIPS grades for thinner refrigerator liners and packaging

ABS grades with excellent aesthetics

New compounds for medical devices, LED lighting, consumer electronics, and high performance films

High flow PS for high-gauge insulation boards

### Ideas Should Become Something **You Can Touch**

Our materials touch almost every corner of the world and virtually every end-market.



#### **Artificial Turf**

Trinseo's latex backing solutions for artificial turf offer safety and durability on the field. They help to improve tuft bind, flexibility, water resistance, and dimensional stability that extend the durability and appearance of the pitch.



#### **Automotive**

Trinseo Automotive offers a portfolio of plastic solutions to fulfill growing demands for vehicles that perform better, are less expensive and polluting, are more comfortable and durable, and are fuel-efficient and safer. In addition to our best-in-class resins, we

also have automotive-dedicated products available, such as PULSE™ Engineering Resins, MAGNUM™ ABS Resins, VELVEX™ Reinforced Elastomers, and INSPIRE™ Performance Polymers. These resins enable us to provide an extensive offering for interior and exterior applications.



#### **Building & Construction**

Trinseo offers plastic resins that provide clarity, strength, light weight, and UV-resistant properties. CALIBRE™ Polycarbonate Resins, MAGNUM™ ABS Resins, and TYRIL™ SAN Resins are fabricated into sheets used in a range of construction applications. Latex

can be used in adhesives, mortars and structural cements, primers and stain blockers, ceiling tile, bridge deck overlays, and road surfaces.



#### Carpet

Carpet is stronger and more durable thanks to latex backing systems from Trinseo. Our products include a wide variety of styrene butadiene, terpolymer, biopolymer, and acrylic latexes to meet specific needs of the carpet industry. Latex imparts

specific physical properties to the finished carpet, including dimensional stability, stiffness and hand, and may be used to enhance performance properties including ignition resistance and moisture barrier.



#### **Consumer Goods**

From household goods to recreation equipment, consumers want products that look good and can handle rough play, weather, and heavy use. With our portfolio of CALIBRE™ Polycarbonate Resins, TYRIL™ SAN Resins, STYRON™ Polystyrene Resins, MAGNUM™ ABS

Resins and EMERGE™ Advanced Resins, we have solutions to meet these tough requirements and more.



#### **Consumer Electronics**

Trinseo collaborates with customers on a wide range of consumer electronics applications – from flatscreen TVs to printers to smartphones. EMERGE™ Advanced Resins, CALIBRE™ Polycarbonate Resins, and STYRON™ Polystyrene Resins help provide

strength to housings, bring high-impact resistance, and provide for perfect color and gloss ensuring appealing aesthetics and high performance properties for this consumer-driven sector.



#### **Electrical & Lighting**

LED lighting, solar electricity generation, smart meters – the electrical and lighting industries are in the midst of a revolution. And we're ready to help with plastics that maximize light output and safety, and that stand up to rough use over the product's lifetime.

CALIBRE™ Polycarbonate Resins and EMERGE™ Advanced Resins provide solutions for electrical applications like switches, plugs, and meters. CALIBRE™ Polycarbonate Resins, EMERGE™ Advanced Resins, and TYRIL™ SAN Resins are used for LED lighting. CALIBRE™ Polycarbonate Resins and EMERGE™ Advanced Resins are also used for smart meters, one of the enabling technologies to achieve reductions in carbon emission and energy usage.



#### **Home Appliances**

With years of experience supplying the home appliance marketplace, we understand the challenges the industry faces today – to reduce costs, improve sustainability, and meet changing consumer tastes. With MAGNUM™ ABS Resins, TYRIL™ SAN Resins, STYRON™

and STYRON A-TECH™ Polystyrene Resins, and CALIBRE™ Polycarbonate Resins tailored for the different applications of the appliance industry, Trinseo provides plastics with great performance that allow manufacturers to downgauge and reduce scrap levels, saving money while improving the freedom of design needed to meet consumer needs.



#### Medical

An increase in minimally invasive surgeries and a shift to more home healthcare monitoring have increased the need for light, yet durable, medical devices. CALIBRE™ and CALIBRE™ MEGARAD™ Polycarbonate Resins, EMERGE™ Advanced Resins, and

MAGNUM™ ABS Resins offer medical device manufacturers options to meet stringent performance requirements while ensuring patient safety and keeping costs low – be it for surgical devices, disposable devices, or equipment enclosures. Certain CALIBRE™ Polycarbonate Resins have even undergone biocompatibility testing.



#### **Packaging**

Protection, convenience, and ensuring product quality are just some of the vital properties needed to help consumers trust the packaged final product. Trinseo offers STYRON™ Polystyrene Resins, STYRON A-TECH™ Polystyrene Resins, CALIBRE™

Polycarbonate Resins, and TYRIL™ SAN Resins for different packaging needs in transparent, rigid opaque, and foamed packaging as well as for bottles.



#### Paper & Paperboard

Printed items used every day – from playing cards, brochures, and magazines to colorful board-based packaging on store shelves – are enhanced by latex coatings from Trinseo. These coatings provide durability protection as well as decorative features, such as high-gloss

finishes for paper and paperboard. Supported by our extensive polymer engineering, we developed styrene butadiene latex, modified styrene butadiene latex, terpolymer, styrene acrylate, thickeners, and synthetic pigments.



### Performance Latex Specialty Applications

Customers who need performance latex for specialty applications turn to Trinseo because of our unique latex heritage and renowned industry leadership. We offer performance

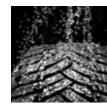
latex chemistries, each with distinctive benefits, to enhance the performance and mechanical properties for a broad spectrum of applications, including: tape saturation, nonwovens, cement modification/restoration, footwear, ceiling tiles, adhesives, running track binders, textiles binders and coatings, and glass mat.



#### **Sheet & Profile Extrusion**

Excellent processability, high lot-to-lot consistency, thermal stability – all are important to the plastic sheet and extrusion profile applications. Trinseo addresses all of these concerns with a broad range of resins. Opaque sheet extruders and

producers of edgebands and profiles choose MAGNUM™ ABS Resins for their excellent balance of features such as toughness and self-colorability, as well as their extrusion and thermoforming processability. Clear sheet extruders, specialty and high-performance films manufacturers, and floormat producers value CALIBRE™ Polycarbonate Resins for their perfect combination of toughness, heat resistance, and clarity. TYRIL™ SAN Resins offer transparency, good processability, and good chemical or impact resistance.



#### Tire & Rubber Goods

As a global leader in the production and distribution of synthetic rubbers, Trinseo offers a broad portfolio of quality rubber products. Polybutadiene rubber is used in tires, industrial rubber goods, and for impact modification. High quality cold polymerized emulsion

styrene butadiene grades are used in standard tires and industrial rubber goods, such as conveyor belts and antivibration parts for automotive or industrial hoses. The focus of our research and development in synthetic rubber is to answer the future challenges of the tire industry. We strive to introduce products that deliver improved safety and increased longevity of products, while reducing rolling resistance and fuel consumption.



The principles of Responsible Care® and Sustainable Development influence the production of printed literature for Trinseo S.A. and its affiliated companies. As contribution towards the protection of our environments, Trinseo's printed literature is produced in small quantities and on paper containing recovered/post-consumer fiber and using 100 percent soy-based ink whenever possible.

#### PRODUCT STEWARDSHIP

Irinseo and its affiliated companies have a fundamental concern for all who make, distribute, and use their products and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products so that appropriate steps may be taken to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Trinseo products from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

#### CUSTOMER NOTICE

Customers are responsible for reviewing their manufacturing processes and their applications of Trinseo products from the standpoint of human health and environmental quality to ensure that Trinseo products are not used in ways for which they are not suitable. Trinseo personnel are available to answer questions and to provide reasonable technical support. Trinseo product literature, including safety data sheets, should be consulted prior to the use of Trinseo products Current safety data sheets are available from Trinseo.

No freedom from infringement of any patent owned by Trinseo or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the customer is responsible for determining whether products and the information in this document are appropriate for the customer's use and for ensuring that the customer's workplace and disposal practices are in compliance with applicable legal requirements. Although the information herein is provided in good faith and was believed to be accurate when prepared, Trinseo assumes no obligation or liability for the information in this document.

#### NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS

Trinseo requests that customers refer to Trinseo's Medical Application Policy http://www.trinseo.com/medical.htm before considering the use of Trinseo products in medical applications. The restrictions and disclaimers set forth in that policy are incorporated by reference.

#### DISCLAIMER

TRINSEO MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, IN THIS DOCUMENT; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE (INCLUDING MEDICAL APPLICATIONS) ARE EXPRESSLY EXCLUDED. TRINSEO DISCLAIMS ANY AND ALL LIABILITY FOR LOSSES OR DAMAGES THAT MAY RESULT FROM THE USE OF TRINSEO PRODUCTS IN UNSUPPORTED USE. TRINSEO MAKES NO WARRANTIES, EXPRESS OR IMPLIED, THAT THE USE OF ANY TRINSEO PRODUCT WILL BE FREE FROM ANY INFRINGEMENT CLAIMS.

For more information on products, innovations, expertise, and other services available from Trinseo, visit www.trinseo.com, or contact us as indicated below

) (+1-855-874-6736)
+1-989-633-1718
+55-11-5184-8722
+54-11-4319-0100
+52-55-5201-4700
+800-444-11-444
+31-11567-2601
+603-7965-53-19
+86-21-3851-1017
CIG@trinseo.com

www.trinseo.com

#### GENERAL NOTICE

Any photographs of end-use applications in this document represent potential end-use applications but do not necessarily represent current commercial applications, nor do they represent an endorsement by Trinseo of the actual products. Further, these photographs are for illustration purposes only and do not reflect either an endorsement or sponsorship of any other manufacturer for a specific potential end-use product or application, or for Trinseo, or for specific products manufactured by Trinseo.

If products are described as "experimental" or "developmental": (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Trinseo to change specifications and/or discontinue production, and (4) although Trinseo may from time to time provide samples of such products, Trinseo is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

For additional information not covered by the content of this document or to ensure you have the latest version of this document available, please refer to the Customer Information Group contact information on our website at www.trinsen.com/contact/

Previously called "Styron", the company announced plans to change the name of all Styron affiliated companies to "Trinseo". Some, but not all, of the Styron companies have completed the name change process and are currently known as "Trinseo"; Styron companies that have not completed this process will continue to do business as Styron until their respective name changes are complete. Styron's operating companies also continue to do business as Styron at this time.

.opyright ©Irinseo (2014) All rights reserved. ™Irademark PResponsible Care is a service mark of the American Chemistry Council