This report covers Techmer PM’s approach to environmental, social, and governance activities for the 2021 calendar year. The report illustrates how we bring our sustainability efforts to life for our customers, shareholders, other stakeholders, employees, and local communities.

Additional information can be found at our website, techmerpm.com
Techmer’s commitment to sustainability can be found in our integrated approach throughout our business.
Welcome to Techmer PM’s first Sustainability Report.

Our 2022 Sustainability Report serves as a communication tool for our progress. Within these pages, you’ll find highlights of our operations, project work, and product developments, along with our employee and community engagement efforts relating to sustainability.

Sustainability has always been a central pillar of the company’s values, and it is only gaining momentum as we continue to grow. We have made great strides in developing sustainable solutions and practices, especially relating to employee development, water consumption, and the amount of waste sent to landfills. I’m proud to highlight that we’ve reduced our water consumption and waste by more than half since 2012.

Sustainability is embedded in our everyday operations, whether it’s related to our Diversity, Equity, and Inclusion (DE&I) strategy, product design, or production. To continue achieving these goals and to enable our customers to meet theirs, we’ve focused on:

- Redesigning work to be more human-centric, emphasizing health and safety, benefits, professional development, and DE&I.
- Boosting the use of recycled resin and creating formulations to help enable recycling.
- Developing products made from biodegradable resins along with compostable alternatives to single-use plastics, and creating bamboo- and wood-filled compostable products for molding.
- Contributing to reducing the weight of automotive parts, helping to extend shelf life for produce packaging, and designing best-in-class purge technologies.

At Techmer, our most valuable resource is our people. Their performance, knowledge, and well-being have a significant impact on not only customer satisfaction, but on cultivating a community of inspiring people.

In our operations, we continue to become more sustainable by creating a work environment that values employee well-being and safety, allowing everyone to thrive in a collaborative and inclusive culture. We have and will continue to invest in our people, our technology, and the improvement of our processes.

We are also committed to a world-class safety culture and have established practices that maintain and promote a safe, healthy, and injury-free environment for all employees. Our goal of zero work-related injuries means we’re constantly striving to eliminate at-risk behaviors in all our locations.

This has been Techmer PM’s practice since the very beginning. We are now formally gathering and documenting these sustainability initiatives to be more focused and transparent about how we’re continuing with our progress.

I am proud of these accomplishments and look forward to what the future holds for Techmer PM as we continue our sustainability journey.

Michael McHenry, CEO
Techmer PM
ABOUT TECHMER PM

We enable our customers to gain greater user-preference for their brands by ensuring their products look and perform as they were envisioned as well as help them attain their sustainability goals. How do we differentiate ourselves from our competitors? We understand the challenges and needs of both the brand owners and processors, and match solutions to give them a competitive edge.

40+

For more than 40 years, we’ve enabled customer success across geographies and market segments, including healthcare, packaging, transportation, electronics, durable goods, and agriculture.
Techmer's History

To understand Techmer’s history and name is to understand what we have sought to accomplish for more than 40 years. “Techmer” combines the words “technical” and “polymer,” exemplifying our expertise and commitment to our craft. PM reflects our pride in polymer modifiers and references our innovative philosophy and focus on challenging and elevating the status quo.

1981
Techmer was founded by John Manuck in Los Angeles.

1985-87
Opened first manufacturing plant in Rancho Dominguez, CA. Partnered with Mitsui Plastics & Tokyo Printing Ink.

1988
Opened first Eastern region manufacturing plant in Clinton, TN.

1995
Achieved ISO 9001 quality management certification.

1999
Acquired Boom Color, adding first Midwest manufacturing plant in Wichita, KS.

2002
Opened Fiber Service Center in Dalton, GA.

2003
Opened first engineering plastics compounding unit in Clinton, TN. 

2004
Acquired Techsurf from BASF.

2008
Acquired value-added colorant producer Accel Color.

2010
President Barack Obama and Vice President Joe Biden visit Techmer plant in Clinton to announce a manufacturing innovation hub.

2013
Acquired TP Composites, adding engineering compounding capabilities.

2015
Opened new facility in Queretaro, Mexico.

2017
Received R&D 100 Award for Additive Manufacturing – Reinforced Carbon Fiber Material.

2018
Achieved ISO 13485 certification in Batavia, IL.

2020
Partnered with Cupron and Nanoxplore.

2022
SK Capital Partners.

2021
Named “Best Places to Work” by Plastics News for the sixth time since 2014.

2022
Gryphon Investors.

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Local Presence With a Global Reach

33+

Techmer products are sold to more than 33 countries worldwide.

North America
Techmer operates six manufacturing sites across North America, serving a diverse customer and market base.
- Clinton, Tennessee: Headquarters and manufacturing site
- Batavia, Illinois: Manufacturing site
- Dalton, Georgia: Manufacturing site
- Los Angeles, California: Manufacturing site
- Querétaro, Mexico: Manufacturing site
- Wichita, Kansas: Manufacturing site

500+

Employees

China
Chinese partner, Far East Plastics, has provided regional support for Techmer PM's customers for nearly two decades. Learn more at: http://www.fepc.com/en/

Japan
A strategic partner since 1987, Tokyo Printing Ink supports Techmer PM's customers in Japan and the Asia Pacific region with high-quality masterbatches produced to Techmer's specifications. Learn more at: https://www.tokyoink.co.jp/en/
A Partner for Our Customers

The work we do for our customers provides us with the unique opportunity to make the world a greener place. We help our customers engage in responsible Environmental, Social, and Governance (ESG) business practices to improve their organization through innovation, unparalleled technical support, and above all, trust.

Innovative ideas to differentiate products
- Unique technology offerings to meet stringent performance and regulatory requirements
- Development partnerships with key suppliers
- ISO 17025 accredited analytical and product development lab
- Application familiarity - asking the right questions

Competitive total cost solutions
- Industry knowledge and proprietary technology
- Lowest letdown ratio (LDRs) in the industry
- Combination products - including UV stabilizers, flame retardants, reinforcement, impact modifiers, wear, and others

Reliable service and predictable quality
- ISO 9001 and ISO 13485 certified for predictable uniformity
- TechmerDirect access 24/7

An accurate color match, quickly, the first time
- Core competency - pigment dispersion with proprietary technology
- Speciality knowledge for applications
  - Understanding materials & their applications
  - Formulating knowledge & materials selection

“For more than 40 years, we’ve enabled customer success across geographies and market segments including healthcare, packaging, transportation, electronics, durable goods and agriculture. If you dream it, we enable it!”

Jon Rogers
VP of Global Sales and Marketing
A VISION FOR THE FUTURE

Our path forward is reflected in Techmer’s new vision statement. Created to symbolize the 21st-century company that Techmer has become, the declaration creates an aspiring tone for what we hope to achieve as an organization while keeping our building blocks intact.

“Enhancing lives and enabling brand success through the design of innovative and sustainable modified polymers.”
Techmer’s Mission Statement

By identifying the purpose of our work, we can better understand the goals Techmer should be committed to accomplishing. Techmer’s mission is to safely design and deliver innovative, high-quality products through a world-class customer experience while helping to preserve the environment. We strive to foster an inclusive culture where all stakeholders are challenged, rewarded, and enabled to drive growth using sustainable technologies. Our dedication to quality and collaboration enables success for our customers.
Our Four Strategic Pillars

Techmer is different in the way we set out to design and unite our Vision, Mission, Strategic Pillars, and Values. Our four strategic pillars shape our organization’s greater purpose and how we serve our customers. At the heart of our sustainability strategy, we enable our customers’ innovation and sustainability goals through world-class products and services.

World-Class Safety Culture
We are fully engaged and take ownership of our own and our colleagues’ safety and wellbeing.

Sustainability
We seek to have a positive impact on society and the environment through robust business processes, product development, and educating the industry.

Operational Excellence
We strive to identify and implement industry best practices, fully leverage system capabilities, and utilize standard processes with the goal to improve the customer experience and deliver best-in-class products and services.

One Techmer
We collaborate across sites and functions to create a diverse and inclusive organization in which we can all thrive, do our best work, and win together.
World-Class Safety Culture

We are fully engaged and take ownership of our own and our colleagues’ safety and wellbeing.
Sustainability

We seek to have a positive impact on society and the environment through robust business processes, product development, and educating the industry.

Techmer California employees make use of the on-site electric vehicle charging stations.
Operational Excellence

We strive to identify and implement industry best practices, fully leverage system capabilities, and utilize standard processes with the goal of improving customer experience, and deliver best-in-class products and services.

ISO 17025 accredited product development and testing lab with wide array of testing capabilities
We collaborate across sites and functions to create a diverse and inclusive organization in which we can all thrive, do our best work, and win together.

McKenzie (technical service), Russell (colormatching), Danielle (production), and Ben (quality control) discuss two fiber colors going through development.
Guiding Principles and Values

Teamwork-Based Safety
We take accountability for our employees by continuously implementing solutions to improve safety while motivating each other to do the same.

Inclusive Culture
We embrace and celebrate differences by maintaining a diverse and welcoming environment that celebrates our team members’ accomplishments.

Honesty and Integrity
We communicate professionally and transparently at all organizational levels to create trust throughout our value chain.

Quality in Everything We Do
We take pride in our work, learning from every challenge while making sure to get it right the first time, every time.

Relationships Matter
We encourage collaboration with colleagues and industry partners where everyone is treated with humility and respect. We motivate our employees to achieve their best work by offering support, constructive feedback, and encouragement.

Curiosity and Ambition
We seek out opportunities for continuous improvement and innovation, taking calculated risks to benefit our customers.

Environmental and Industry Stewardship
We deploy sustainable practices that preserve our environment and communities for future generations. We also champion change, work with thought leaders, and inspire others to support sustainable innovation.

Strong governance fosters sustainability, creating a culture of transparency, accountability, responsibility, and fairness.
Focus on Growth

Through our work, we have identified several strategic focus areas that we believe will become increasingly important to our customers and the industry as a whole.

Flexible Packaging & Film
Expand the Flex & Films market with a focus on solutions that improve product protection and shelf-life extension.

- Applications
  - Agriculture
  - Building & Construction
  - Food & Beverage
  - Healthcare

Synthetic Fibers
Maximize the performance benefits of recycled materials, bio-based polymers, and MaxChroma®.

- Applications
  - Artificial Turf
  - Floor Coverings
  - Nonwovens
  - Textiles

Engineered Compounds
Solve application needs with the ability to be highly flexible and sustainable. We welcome formulation complexity and customization to provide value.

- Applications
  - 3D Printing
  - Aerospace
  - Electronics
  - Industrial
  - Transportation

Healthcare
Champion innovative sustainable solutions that also meet the strict regulatory guidelines for the healthcare market.

- Applications
  - Diagnostics
  - Drug Delivery
  - Labware
  - Surgical Devices
  - Medical Devices

Rigid Packaging
Deliver sustainable solutions to the rigid packaging market with brand-affirming color, functional performance, and processing efficiency.

- Applications
  - Food and Beverage
  - Health and Beauty
  - Healthcare/Pharma
  - Household
  - Industrial
Becoming sustainable at the core means addressing the social dimension of sustainability within our organization, our business ecosystem, and the communities in which we operate.

For our employees, Techmer is focused on retention and engagement strategies, and redesigning work to be more human-centric, emphasizing on health and safety, benefits, professional development, and DE&I.
People Sustainability

At Techmer, our most valuable resource is our people.

We hire innovators and thought leaders who pride themselves in pioneering the sustainability landscape.

At Techmer, we believe our people are the key to our success. Their performance, knowledge, and well-being have a significant impact on not only customer satisfaction but on cultivating a community of inspired people.

Techmer leadership puts as much emphasis on the internal corporate environment as it fosters in the external global environment it seeks to protect.

In the area of people and culture, we focus our efforts on the following fundamentals:

- Employee Safety
- Professional Growth and Development
- Diversity and Inclusion
- Culture of Innovation
- Giving Back to the Community

This attention to employees has paid off for Techmer, with 30% of our team having been with the company for more than 20 years. Nearly half have been with the company for more than a decade.

Employee Engagement

Employee feedback plays a crucial role in creating a positive work environment and in attracting and retaining top talent. We are only successful by asking ourselves what’s working and what needs to be improved upon. As so, we ask employees to share observations through regular engagement surveys and in our daily interactions.

In 2022, we shared engagement survey results with employees across the company. Through 29 facilitated workshops, we requested and analyzed what could be sustained or improved to ensure Techmer remains a great place to work. We then synthesized and shared this feedback with leaders across the company to identify what’s most important for us to focus on at the enterprise and site levels.

Future is Bright

With more than 500 employees, Techmer has been named as Plastics News’ Best Places to Work six of the past eight years.

“Our team is constantly working to create an environment where employees can thrive, grow, and develop their skills and capabilities. An engaged and innovative team ensures the long-term success of our business.”

Elizabeth Perusse
Vice President of Human Resources
Professional Growth and Development

By actively creating opportunities and providing professional development for employees, we aim to ensure knowledge and skills stay relevant and up to date. Training of our workforce is integral in maintaining our award-winning company culture while enabling teams to accomplish business goals.

Talent Management
Techmer strives to create an environment where employees can learn, grow, and be innovative. We’re committed to attracting and retaining talent who can help us evolve. We do this by providing opportunities for development, including cross training, functional projects, and internal job postings.

Techmer welcomes new team members who bring varied experiences while learning from colleagues who have been part of our success from the beginning. This creates opportunity to share knowledge that ultimately makes us better.

Total Compensation
Techmer regularly benchmarks our compensation and benefits programs to local and national markets to ensure our total compensation package allows us to attract and retain top talent.

Performance and Development
In late 2021, Techmer implemented a structured annual goal setting process for all employees aligning individual goals with business priorities. We also developed company-wide competencies based on our values.

Our value-based competencies guide what we do and how we do it. Moving forward, they'll be integrated into all of our People Programs.

Skill Building
Through the implementation of a Learning Management System (LMS), we're enabling employees to access required and elective training content.

We also encourage our employees to take advantage of our competitive Tuition Reimbursement program for those wishing to attain an undergraduate or graduate degree.
Mentoring Employees to Reach Their Full Potential

“I began my journey with Techmer as a machine operator in 2016. I was given the opportunity to work in the lab and then promoted to a Production Supervisor. Over the last year, I decided to take advantage of the company’s tuition reimbursement program and go back to school. I am currently on track to graduate in late 2023 with a bachelor’s degree in business. I was just promoted to Production Manager, and I am looking forward to my next chapter with Techmer.”

“I just completed my 25th year with Techmer, and I am pleased to state that I am not alone in my tenure. I have been blessed to work with many different teams at Techmer, which continues to help me grow both professionally and personally. I am extremely grateful to be part of a company where collaboration and new ideas are encouraged, successes are celebrated, and opportunities are limitless. I am proud and humbled to be a part of the incredibly talented team at Techmer, and I am thankful for the opportunity to continue to contribute to our continued success.”

“In over 20 years with Techmer, I’ve been able to grow my career from mixing and machine operations to supervisory roles in our Clinton, TN facility. My technical skills have grown throughout my career at Techmer and so have my management skills through course work at a local community college and through Supervisor Essentials Knowledge offered by Techmer.”
Cross Functional Project Leadership Showcase / MPV Project

In developing Techmer’s Core, Vision, Mission, Pillars, and Values, our leadership team felt the project would be more impactful if these were created by a dynamic and diverse team of respected leaders who represent all facets of the company. Over five weeks, “Team Motivation Proclamation,” a group of 12 Techmer employees, shared insights and perspectives from their unique backgrounds to help develop the future of Techmer.

The new vision statement creates an aspiring tone for what we want to achieve as an organization. The group looked at the key pillars and values that will drive our success and then crafted a memorable mission statement that will resonate with all levels within our organization. Once these were both determined, the team broke into smaller groups to ideate values and characteristics important to each individual before regrouping to share and identify common themes and ideas. From this large list of values, they were able to identify the four strategic pillars of Techmer.

“The MPV project allowed me to build strong relationships with members of the team while working together to achieve the goal of developing the new Mission, Pillars and Values of Techmer. While collaborating with this cross-functional group, we were able to enhance our creativity, engage in deep conversations, and further develop our communication skills. Because of this project, I was able to expand my teamwork and cooperation skills. This experience has allowed me to implement the Mission, Pillars, and Values with every department within Techmer, as well as externally with our customers and suppliers.”

George Barker
Senior Process Technician
Clinton, TN

“We while working with the MPV group, I realized that one of the many great aspects of working for Techmer is being given the opportunity to collaborate with our positive and motivated team members across functions. Over the last 17 years, I have appreciated being mentored by colleagues who have helped and encouraged me to achieve success in my career.”

McKenzie Norman
Technical Service Engineer - Fiber
Clinton, TN

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Culture of Innovation

At Techmer, we foster a workplace environment that encourages employees to introduce creative ideas and solutions.

To help customers actively address environmental and sustainability issues, our company facilitates and actively participates in a number of ESG and sustainability working groups, bringing together industry competitors to collectively solve problems, benchmark progress, and develop strategies.

Sustainable Packaging Coalition
Techmer’s membership and participation in the Sustainable Packaging Coalition (SPC) is key to carrying out our sustainability goals. With the packaging market taking center stage in the sustainability movement, stakeholders gather together to educate, ideate, and create actionable change toward a greener future.

Technology Seminars and Innovation Summits
Techmer’s market managers hold both internal and external innovation seminars to identify ways to better serve our customers’ needs and find solutions to their challenges. Topics deliberated include but are not limited to:

- What are the industry trends?
- What technologies should we develop?
- How can we help our customers achieve greater manufacturing efficiencies?
- What environmental and regulatory challenges can we help solve?
- What questions do our customers have and need guidance on?

Fibertech Innovation + Technology
Fibertech Innovation + Technology conference, presented by Techmer, features the latest technology developments and product innovations in the colorant and additive industry for the fiber market. The conference addresses both business and technical issues facing fiber producers worldwide, with leading authorities reporting on the latest industry trends, economics, technology, and advances in fiber performance, fiber processing, and productivity.
Techmer Named R&D’s Top 100
Materials design breakthrough advances capabilities of large part Additive Manufacturing

- Techmer earned an R&D 100 award for its collaboration with Oak Ridge National Laboratory and BASF to design the first commercial 3D-printable thermoplastic tooling materials suitable for production of composite parts via autoclave curing.

- These advanced materials allow for rapid design changes and iterative optimization trials at a fraction of the cost and time of existing/alternative processes.

- 3D printing of composite tooling results in a total cost savings of up to 90 percent compared to existing technology that uses expensive, machined metal molds such as aluminum, steel, and INVAR.

- By utilizing an additive manufacturing process, it removes the need to cast a metal mold from mined raw materials and transport the mold to the final production site. Many printed molds are produced at the same manufacturing site of the final parts. These printed molds are also able to be fully recycled after appropriate downsizing and grinding of the printed parts.
Employee Safety First

World-class safety culture – Employees return home the way they came to work.

Techmer is committed to maintaining and promoting a safe, healthy, and injury free environment to all employees.

We have established practices that define and identify roles and responsibilities, work procedures, necessary equipment, employee training, and other measures that allow employees a safe work environment. Safety is a core value not only at the production floor level but throughout all levels of management. By targeting at-risk behaviors and unsafe conditions, we are driving continual improvement in our safety programs leading to a goal of zero injuries.

Promoting and Reporting
It’s important that each employee feels safe in the space they work, whether in the field or an office. Our goal of zero work-related injuries requires a consistent company-wide commitment.

All levels of management have responsibility in recording safe work observations - playing a key in preventing recurrence. By clearly establishing guidelines, protocols, and expectations for day-to-day activities, we proactively mitigate risk.

The reporting of incidents, at-risk behaviors, and unsafe conditions, coupled with the identification of the root causes leads to the implementation of corrective actions.

“Elimination of at-risk behaviors in each of our locations is Techmer’s long-term strategy to eradicating work-related injuries and environmental releases. As a process, safety is centralized at a corporate level, with each location having an Environmental, Health, and Safety Manager.”

Eric Selbe
Corporate Director of Environmental, Health, Safety, and Regulatory

Zero environmental, health, or safety violations during 2021

Installation of environmental controls in production areas for employee safety from high temperatures

36% reduction in Total Case Injury Rate from 2019 to 2021
Giving Back to the Community

In parallel with enabling our customers to achieve their sustainability goals, Techmer aims to create a positive impact through charitable giving and volunteerism. We aspire to be a good neighbor within the communities we live and work.

Student Co-ops and Local Government
Techmer collaborates continuously with local high schools to provide practical work experience for students. Creating a pipeline of future talent, it's a win-win for the company and scholars alike.

Additionally, in 2021, our Batavia site became a board member of the local Chamber of Commerce, participating in meetings and discussions with the community.

Aid to Distressed Families of Appalachian Counties (ADFAC)
Each year, Techmer donates to the ADFAC organization to assist with their mission of providing resources such as housing assistance and school supplies for low-income residents in Appalachian counties. The particular organization was chosen through the Techmer Employee Volunteerism Program (EVP).

Holiday Giving
Techmer partners each holiday season with the Campbell County Department of Children's Services and Compton Salvation Army to provide gifts to children in need as well as food and basic necessities.

Norris Lake (East TN) Cleanup
Joining the local East Tennessee community, Techmer employees stepped forward to help clean up Norris Lake. Volunteers ferried around the lake, going from bank to bank collecting debris, garbage, and large styrofoam waste for controlled disposal.
Our purpose of action is to preserve the environment for future generations. Techmer strives to reduce energy usage, eliminate waste, conserve water, and create technologies to help our customers achieve their sustainability goals.
Sustainability as a Central Pillar

We strive to have a positive impact on our society and environment by championing sustainable technology and education initiatives with all of our stakeholders both internal and external.

Our Sustainability Approach
Integrated into everyday operations, sustainability is one of Techmer’s central pillars. Our strategy involves our people and partners to envision a better future and work toward making it happen, building a business that reflects purpose.

To achieve sustainability goals and enable customers to meet theirs, we focus on the following key areas:

- Reducing resource consumption and waste-to-landfill
- Working with upstream suppliers to lower carbon footprint and develop new technologies
- Implementing technologies to drive internal and customers’ sustainability goals
- Earning certifications to ensure compliance with applicable standards and achieving set goals

We provide optimized solutions to enable customers to meet their sustainability goals through collaboration and by leveraging leading-edge technology. Techmer’s materials design solutions address key sustainability challenges facing the industry today and what we feel will be important in the years to come. Our technologies fall into three categories, all with the goal of addressing the growing need for sustainable solutions in plastics:

- Recycle Enablers
- Alternative Resin Solutions
- Sustainability Enablers

Sustainability Embedded in Our Product Design
Techmer is a leading materials design company that works in partnership with plastics processors, OEMs, and designers to solve some of their most difficult business, manufacturing, and sustainability challenges.

Sustainability Embedded in Our Production
Techmer operates five manufacturing sites within the United States, with global reach supported by a plant in Mexico and distribution centers in Europe and Asia. Sites regularly discuss best practices around sustainability - including a joint project on optimized purging procedures that was developed among our Batavia, Dalton, and Clinton sites.

“Led by our mission and principles, we craft sustainable solutions to create products that maintain and uphold our responsibility to the communities in which we work.”
Kaan Serpersu
Product Development and Sustainability Manager
Techmer’s Corporate Sustainability Team was created to champion the sustainability efforts for both the business and our customers.

In the winter of 2019, the Techmer leadership team asked for volunteers to join the Corporate Sustainability Team. The idea for the team was simple - members were to be selected from diverse backgrounds, regions, departments, and disciplines in order to work together to solve sustainability challenges. By forming a diverse team representing different departments and perspectives, problems could be tackled from multiple ways to find the best solutions.

The scope and goals for the team include, but are not limited to:

- Lead Techmer in having a net positive impact on the environment
- Support customers in meetings - and in some cases - defining their sustainability goals
- Research, monitor, and update regulations and requirements pertaining to sustainability and develop new processes and technologies to fulfill those needs
- Educate employees on sustainability topics such as single-source and chemical recycling, among others
- Ensure Techmer is compliant with applicable sustainability certifications
- Work with local governments and bodies on preserving the regional environment
Working To Create A Culture of Sustainability

OPERATIONS

“Operational excellence coincides with sustainability and long-term growth. At Techmer, we are focused on reducing our ecological footprint to a fingerprint by creating products that exceed customer goals while using the leanest processes possible.”

Danielle Ceccarelli, Process Tech Supervisor and Rathon Zilbar, Site Manager

COMMERCIAL

“Techmer’s experience in sustainability and circular economy brings direct value to our customers. Our successes become our customers’ successes, resulting in products that are better for people and the environment.”

Anthony Fiorini, Business Development Manager - Additive Manufacturing and Steve Smith, Rigid Packaging Market Manager

PRODUCT DEVELOPMENT

“Sustainability is a key criteria in new product design - whether it’s a new material to enhance recyclability, reduce energy/water usage through production efficiency improvements, or working with a vendor on new sustainable technology. We focus on how to help customers exceed their current sustainability goals, preserve our environment and be good industry stewards in plastics.”

Lindsey Yarbrough, Technical Service Engineer - Compounds and 3DP and Kaan Serpersu, Product Development and Sustainability Manager

From left: Kaan Serpersu, Danielle Ceccarelli, Anthony Fiorini and Lindsey Yarbrough
Techmer’s sustainable solutions provide environmentally friendly materials without compromising on form or function. Our technology focus is driven by three core development areas: recycle enablers, alternative resins, and sustainability enablers.

**Recycle Enablers**
Our additives and compounds help brands use post-consumer and post-industrial recycled plastics for use in rigid packaging, fiber, and other applications.

- Maximized the levels of PCR/PIR in multiple processes
- Intrinsic Viscosity Builder for PET bottles and fiber
- NIR sortable black colorants

**Alternative Resin Technologies**
Brands can achieve full product functionality and design with our specialty compostable and/or biodegradable solutions.

- Flexible films and rigid packaging biodegradable resins
- Compostable wood-filled moldable compounds
- Compostable resins for single-use plastic alternatives
- Biobased alternatives to fossil fuel resins

**Sustainable Enablers**
Our additives and compounds help brands reduce consumption through lighter-weight materials, reduce food and content waste generation, purge compounds, extend product life, and maximize product usability for consumers.

- Lightweighting technology for reduced energy and material consumption
- Content waste reducers for food and consumer packaging
- Shelf-life extenders for produce
- PFAS-free processing aids
Techmer partnered with Dimensional Innovations to produce a series of 3D-printed projects.

**IDS Center Installation – Minneapolis, MN**

- Dimensional Innovations was contracted to assist in designing and producing an organically-inspired seating area at the IDS Center in downtown Minneapolis.
- Techmer's wood-flour filled PLA material printed flawlessly using Dimensional Innovation's Large Scale Additive Manufacturing (LSAM) printer.
- Using a bio-derived PLA resin from Natureworks and wood flour filler, the organically-inspired design was infused into the materials.
- The final parts do not contain any fossil fuel-based materials or mined materials.

“Techmer’s understanding of sustainable materials design, experience in wood flour compounding, and additive manufacturing knowledge made them an ideal partner for this project.”

Paul Martin
Director of Advanced Manufacturing Solutions, Dimensional Innovations
Sustainable Materials — Biobased Polyamide 11

Derived by Arkema from castor oil, which is not a food source, Techmer helps introduce a new fiber grade biobased nylon to the marketplace.

- Techmer partnered with Arkema to introduce Rilsan® PA11 at Fibertech 2021.
- To maximize the amount of biobased content, Techmer developed and tested an assortment of colors and additive packages, all carried in Rilsan® PA11.
- Polyamide 11 has many enhanced properties over traditionally use polyamide resins:
  - 100% biogenic carbon
  - Reduced density for lightweighting
  - Chemical, hydrolysis, and fuel resistance
  - Significantly lower water absorbance over PA6 and PA66
  - Recyclable
  - Lower processing temperature
  - Stain resistant

“Techmer is an ideal partner to work with on our new fiber grade of Rilsan® PA11. They took on the challenge of spinning a new resin with enthusiasm, even introducing it to their fiber customers. By educating their customers on this new resin type, they are committed to expanding the usage of sustainable resins.”

Dr. Jake McDonough
Ph.D., Business Development Manager
- Textiles at Arkema

Castor beans used to make Rilsan® PA11
Arkema has been making this polymer from castor oil for 75 years.
Purges, PCR, and Stabilization
Over the past year, Techmer has partnered with many customers to assist them in reducing their waste either due to production via purges, increasing PIR/PCR content, and/or stabilization. By designing for long-term service, the reduction in waste comes from only having to make parts once as opposed to one-time use or early part breakage.

One specific need for polyethylene terephthalate* (PET) recycle is to improve the intrinsic viscosity (IV) of incoming PIR/PCR to maximize recycled content. The reason for the drop in IV is due to processing of PET. This can limit how much recycle can be included in the final parts due to changes in processing, performance, and yellowness. By developing an IV builder/stabilizer, this allows OEMs and processors to increase the amount of recycle materials they can include in final parts.

Purge Case Study
Reducing waste when performing a color change is a welcomed challenge by both Techmer and many of our customers - made especially difficult in Extrusion Blow Molding (EBM).

Techmer developed PFM117632 as an EBM-specific purge to reduce waste in the form of plastic scrap, energy, and water.

Using a development partner to first trial this product, the customer was able to clean a bold purple from their lines in under 15 minutes using only two pounds of our material - previously this process took several hours. The customer now uses the purge routinely across seven plants. Many other customers have also experienced similar success and have incorporated PFM117632 into their everyday procedures.

Beyond this purge, Techmer has developed speciality grades for injection molding, film processing, and fiber production. These are also used on our own equipment to achieve faster changeover, and reduce scrap generation and water/electricity waste for improved machine efficiency.

* PET is a highly recyclable plastic resin and a form of polyester. It is the most recycled plastic in the U.S. and worldwide.
In parallel with advising our customers on sustainability topics, Techmer is also managing our own initiatives. Our practices include using energy efficiently, minimizing water and landfill waste, promoting and participating in recycling programs, and disposing of waste safely in compliance with all government regulations. Throughout our internal and external processes, we keep our carbon footprint and energy use as small as possible, all while designing materials that uphold our clients’ brand integrity.

While we have made significant progress, we can always do more. Our goal is for continuous improvement.

Drivers in our Operations for Sustainability
- Operation Clean Sweep - All Techmer sites are Clean Sweep certified
- Purge Optimization - Increase machine efficiency, eliminate contamination requiring rerun orders and machine waste, and reduce water/power usage to generate the same order
- Investing in renewable energy and partnering with local power suppliers
- Moving to high-efficiency LED lighting in all facilities
- Replacing propane powered forklifts with battery operated lifts
- Collaborate with local government and companies on sustainability efforts and education

Achievements and Goals
- Zero waste-to-landfill - Three production facilities are zero waste-to-landfill, with certification audits planned for 2022 and 2023
- EcoVadis - Currently Techmer has a Bronze rating with the goal to be Silver rated in 2023
- Continue to reduce water, power, and waste to landfill – Water reduced by 44.8%, power reduced by 19.3%, and waste-to-landfill reduced by 51.7%*
- Installation of a visual notification system for faster information transfer between production and quality assurance

“At Techmer, we’ve embedded ‘sustainability in practice’ in how we design and manufacture products. Working towards our ESG goals, we’re committed to driving sustainability through our operations, partnering with suppliers, customers, and the communities we serve to promote progress.”

Craig Burnett
VP of Operations

*data provided is for 2021 compared to 2018
Proof of Performance – EcoVadis

**Sustainability is at the heart of Techmer’s strategy.**
We ensure our company is continuously improving our EcoVadis sustainability scores and applying for other certifications, including zero waste-to-landfill and LEED. Certifications position us for success when creating new additives and colorants, enabling us to be a competitive leader in the marketplace.

Techmer works from the top down, not only improving sustainability scores internally but also by collaborating closely with customers to enable stronger brand appeal, greater performance and improved sustainability scores consistently from one batch to the next.

EcoVadis is one of the world’s largest and most trusted certifications of business sustainability ratings. Techmer has been voluntarily assessed since 2017, improving scores annually to be rated as Bronze in 2022.

The EcoVadis audit covers topics beyond product development, with focuses on environment, labor and human rights, ethics, and supply chain management. This certification gives us and our customers confidence that we are working towards a more sustainable future.

Techmer is working toward earning Silver level certification through dedicated sustainability efforts. Projects include updated supplier code of conduct contracts; rigorous monitoring and improvements in regards to power, water and gas consumption; upgraded human resources documentation program and employee reach-out program, and focus on employee safety.
Internal Initiatives
Minimizing Waste Generation

- Establish waste-to-energy program at all sites
- Strengthen recycling programs
- Focus on reduction/reuse rather than disposal
- Repurpose aged raw materials
- Install visual notification system for faster awareness and improved production efficiencies
- Foster innovative ideas
- Optimize purging procedures and production best practices for greater output efficiencies
Zero Pellet Loss

Operation Clean Sweep

Operation Clean Sweep started for Techmer through the California facility due to its proximity to the Pacific Ocean and the challenges of keeping plastic pellets out of the environment.

With the goal of zero pellet loss, the company was certified in 2006. Operation Clean Sweep also assists in avoiding stormwater contamination violations that can lead to damages to the surrounding habitat and ocean life.

All Techmer sites are Operation Clean Sweep certified with procedures and practices to prevent pellet loss. Installed at all locations are pellet catchers at exits, boot brush stations, and pellet capture units at railcard loading areas.
Internal Initiatives

Energy Optimization

- Install energy efficient lighting and motion-activated light switches at all locations
- Utilize energy efficient technologies
- Refurbish existing equipment with upgrades for longer life and better performance
- Adhere to shut down procedures
- Continue to invest in renewable energy and explore all possible options at every production facility
- Switched from propane to electric forklifts in many sites with all sites being investigated for feasibility
- Invested in TVA GreenFlex program
- Installed electric car charging stations in CA, with additional being investigated at other sites
- Investigating solar panel installations for KS and MX facilities
Reducing our carbon footprint and energy consumption

Green Flex Agreement
In July of 2021, Techmer signed a Green Flex agreement with the Clinton Utilities Board. Green Flex, a partnership program with the Tennessee Valley Authority, allows businesses to buy renewable energy certificates from wind power to offset their carbon output.*

In 2020, the Tennessee Valley Authority worked with local power companies to redesign its renewable energy programs to help make green energy more accessible to local businesses. Green Flex gives them the ability to make renewable energy claims and allows them to demonstrate to their customers that they’re in support of green initiatives.

Techmer has continued using this program into 2022 and is evaluating expanding this idea to our other facilities, where available by our energy partners.

“Reducing carbon is not only good for the environment, it’s smart business. Consumers want to buy products from environmentally friendly companies, and Green Flex gives businesses a competitive advantage to help them quickly achieve their sustainability goals.”

Steve Loney
Director Of Marketing

Operational Optimizations
Techmer has a number of optimization projects underway including moving all facilities to high-efficiency LED lighting and utilizing best-in-class purge procedures, using our purge compounds sold on the market on our own equipment.

Starting with the Clinton plant, we are moving forklifts away from propane-based units to electric in efforts to utilize renewable energy. Electric car charging stations were also recently installed at our California location, with additional units being reviewed for other sites.

Carpooling is offered at our Mexico facility, with 80% of plant employees taking advantage of it. Further reducing carbon emissions due to commuting, all sites offer a robust work from home plan for eligible employees.

*Clinton site only
Reducing Water Consumption

• Continue to utilize state-of-the-art chiller and Oberlin water filtration systems
• Restrict flow valves
• Resize equipment
• Reuse water when feasible
• Engage employees for new ideas in water-saving practices
Water Resource Management Highlights

Frigel Efficient Water Chillers
The Frigel chiller is an energy, and water-efficient unit used at Techmer facilities. During the cooling process, the machine is able to keep water at 95°F or lower, depending on the surrounding temperature.

If cooler water is needed for production, the system feeds into a mechanical chiller - the more energy intensive process of the two. Used only as demand requires, the system was purposely designed to minimize energy and water consumption.

Oberlin Water Cleaner
To ensure quality water is leaving our Clinton facility, Techmer utilizes an Oberlin water cleaner.

Using the ultra-fine and absorbent diatomaceous earth (DE) as filtering media, water is purified to as little as three microns, reducing the amount of chemicals used to pretreat the water.

Since the DE filter rests on a second media that comes in a roll, it also reduces the amount of packaging that typically comes with other filter types, such as cartridge or boxed filters.

After water passes through the unit, it is checked by local water companies to confirm purity. All filtered waste is collected and sent to waste-to-energy conversion, preventing any filtrate from contaminating local ground or landfills.
In June of 2020, Techmer announced its strategic partnership with an affiliate of New York-based private investment firm SK Capital. The partnership served as a catalyst, allowing the company to expand and accelerate its client impact and bring new capabilities and technologies to the business of sustainability.

As a company, we recognized an opportunity to step forward and provide more support and value to our customers. We helped our customers emerge from 2021 as more resilient and sustainable businesses, working to meet their objectives.

Techmer also continued to invest internally throughout the last year. Grounded in our core values, our employees worked toward the greater purpose of our company. We’re devoted to our people, our technology, and continuous improvement of our processes to provide one of the best places to work in the industry. We continue to strengthen our focus on those areas where we have not fully met our targets or where we want to aim higher - increasing diversity, equity, equality, and inclusion in our workforce; improving employee well-being and training, and quantifying the sustainability impacts of our work with customers and beyond.

Looking ahead, we’re aiming to:

- Certify our Dalton, GA and Los Angeles, CA facility as zero waste-to-landfill
- Investigate renewable energy offerings for all sites and implement where possible
- Continue to incorporate employee feedback and foster a conducive work environment
- Identify and champion key sustainable technologies
- Earn certification as EcoVadis Silver level
- Implement energy efficiency project to move to 100% LED lighting

We understand that to build upon our success, we must cultivate and maintain a culture where quality is ingrained into every aspect of our work. As we progress, Techmer remains committed to sustainable practices through our client work, operations, and broader collaborations.

We continue to reduce our energy and water consumption and waste generation, setting targets for 2023 and beyond.

We understand that to build upon our success, we must cultivate and maintain a culture where quality is ingrained into every aspect of our work. As we progress, Techmer remains committed to sustainable practices through our client work, operations, and broader collaborations.