



## DowFriends Summer News

### Purpose into Action

We are proud to share Dow’s 2020 Environmental, Social, and Governance (ESG) Report “INtersections” with you. Dow has designed this report to help all our stakeholders better understand not only what Dow’s goals are, but also how we’re advancing toward those goals and most importantly, how we’re holding ourselves accountable for results. You can view the report in an [interactive digital format](#) or [download a copy](#).

To meet the challenges of our business and society, Team Dow is at work to find new and better answers to transform our world. It takes collaboration and innovation to achieve our ambition and deliver value growth and best-in-class performance. With intention and clarity, we will create a stronger future together through a more sustainable planet.

INNOVATIVE	CUSTOMER-CENTRIC	INCLUSIVE	SUSTAINABLE
Alongside our customers, we create the materials and solutions that transform our world.	We aim to be easy, enjoyable and effective to do business with through all our digital and personal interactions.	We champion a fully inclusive workforce that reflects the world in which we do business, because it's the right thing and smart thing to do.	In everything we do, we strive for positive impact on society and the planet.

  
 Seek Together™



"Team Dow has risen above every challenge the world has faced this past year and has made remarkable gains against our ESG priorities. And for the first time, Dow has combined our ESG story into one report. It's holistic, it's comprehensive, and a testament of the work Dow has done and what we aim to achieve."

**Karen S. Carter**  
**Chief Human Resources Officer & Chief Inclusion Officer**

Four senior Dow leaders share their thoughts on how Dow continues to drive action on its ESG priorities

[Learn more](#)

## Dow Recognized as One of The 50 Most Community-Minded Organizations



Dow has been named a 2021 honoree and the Materials Sector leader of [The Civic 50](#) by Points of Light, the world's largest organization committed to inspiring, equipping, and engaging people to take action to change their communities and the world.

"Our purpose is simple: to deliver a sustainable future for the world through our materials science expertise and in collaboration with our partners," said Howard Ungerleider, Dow president and CFO and chair of the Dow Company Foundation. "Achieving this purpose is a responsibility we take very seriously and Dow's placement on The Civic 50 is a recognition of our progress. It also motivates us to

do even better, as it allows us to be measured among the best."

The Civic 50 provides a national standard for corporate citizenship and showcases how companies can use their time, skills and resources to drive social impact in their communities and within their organizations. The honorees are companies with annual U.S. revenues of at least \$1 billion and are selected based on four dimensions of their corporate citizenship and social impact programs – investment of resources; integration across business functions; institutionalization through policies and systems; and impact measurement.

Throughout 2020, Dow contributed to sustainable communities by supporting strategic investments to address the world's most pressing challenges including the COVID-19 pandemic, unprecedented weather events, and systemic racism and inequality, among others. [Learn more about Dow's social impact.](#)

"Through social investments, shared purpose and meaningful engagement, we collaborate across the globe to build more sustainable and resilient communities where we live and work," said Nancy Lamb,

president of the Dow Company Foundation and director of Dow’s global citizenship. “Aligned to our ambition, our global citizenship strategy seeks to apply our innovative technology, employee expertise and volunteer service, and culture of inclusion to generate positive social impact.”

“Points of Light believes that corporate leadership and commitment to civic engagement is critical to strengthening communities,” said Natalye Paquin, president and CEO, Points of Light. “We thank Dow for their commitment to building community resiliency and their investments that deliver social impact across the world.”

Since it was launched in 2012, The Civic 50 has provided a roadmap for good corporate citizenship and showcases how committed companies are moving social impact, civic engagement and community to the center of their business. The survey is administered by True Impact, a company specializing in helping organizations maximize and measure their social and business value and consists of quantitative and multiple-choice questions that inform the scoring process. The Civic 50 is the only survey and ranking system that exclusively measures corporate involvement in communities.

To learn more about The Civic 50 and honorees, please visit [www.civic50.org](http://www.civic50.org).

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## Dow Reports Second Quarter 2021 Results

*Dow released its 2021 second quarter results. View the financial highlights below.*



- GAAP earnings per share (EPS) was \$2.51; Operating EPS<sup>1</sup> was \$2.72, compared to a loss per share of \$0.26 in the year-ago period and an increase of \$1.36 versus the prior quarter. Operating EPS excludes certain items in the quarter, totaling \$0.21 per share, primarily related to an early extinguishment of debt and digitalization program expenses.
- Net sales were \$13.9 billion, up 66% versus the year-ago period and 17% sequentially, with gains in all operating

segments, businesses and regions.

- Local price increased 53% versus the year-ago period and 16% sequentially, reflecting gains in all operating segments, businesses and regions, driven by tight supply and demand fundamentals across key value chains.
- Volume increased 9% versus the year-ago period, with gains in all operating segments, led by polyurethane and silicones applications on demand recovery from the impact of the pandemic. Sequentially, volume increased 1% as demand gains in infrastructure, industrial and personal care end markets were partly offset by lingering supply constraints from the impact of Winter Storm Uri on the U.S. Gulf Coast.
- Equity earnings were \$278 million, up \$373 million compared to the year-ago period, primarily driven by margin expansion in polyurethanes and polyethylene at the Sadara and Kuwait joint ventures. Equity earnings were up \$54 million compared to the prior quarter, primarily driven by the Thai joint ventures.
- GAAP Net Income was \$1.9 billion. Operating EBIT<sup>1</sup> was up \$2.8 billion from the year-ago period, with increases in all operating segments and businesses. The gains reflected margin expansion and improved equity earnings due to tight supply and increased demand across key

chains. Sequentially, operating EBIT was up \$1.3 billion, with increases in every operating segment and business.

- Cash provided by operating activities – continuing operations was \$2 billion, up \$422 million versus the year-ago period and an increase of \$2.2 billion compared to the prior quarter. Free cash flow<sup>1</sup> was \$1.7 billion.
- Dow reduced gross debt by \$1.1 billion in the quarter. The Company's proactive liability management actions to redeem existing notes maturing in 2024 have resulted in no substantive long-term debt maturities due until the end of 2025 and a reduction in annual interest expense by \$35 million.
- Returns to shareholders totaled \$722 million in the quarter, comprised of \$522 million in dividends and \$200 million in share repurchases.

## SUMMARY FINANCIAL RESULTS

<i>In millions, except per share amounts</i>	Three Months Ended June 30			Three Months Ended March 31	
	2Q21	2Q20	vs. SPLY [B / (W)]	1Q21	vs. PQ [B / (W)]
Net Sales	\$13,885	\$8,354	\$5,531	\$11,882	\$2,003
GAAP Income, Net of Tax	\$1,932	\$(217)	\$2,149	\$1,006	\$926
Operating EBIT <sup>1</sup>	\$2,828	\$57	\$2,771	\$1,554	\$1,274
Operating EBIT Margin <sup>1</sup>	20.4%	0.7%	1,970 bps	13.1%	730 bps
Operating EBITDA <sup>1</sup>	\$3,573	\$757	\$2,816	\$2,271	\$1,302
GAAP Earnings Per Share	\$2.51	\$(0.31)	\$2.82	\$1.32	\$1.19
Operating Earnings Per Share <sup>1</sup>	\$2.72	\$(0.26)	\$2.98	\$1.36	\$1.36
Cash Provided by (Used for) Operating Activities – Cont. Ops	\$2,021	\$1,599	\$422	\$(228)	\$2,249

## Dow to Build MDI Distillation and Polymers Facility in Freeport, TX

**Capacity to support and advance downstream systems growth in construction, consumer, and industrial systems markets; Dow to exit and shut down its polyurethane assets at La Porte, Texas operations**



Dow announced today plans to build an integrated MDI distillation and prepolymers facility at its world-scale manufacturing site in Freeport, Texas. This investment supports increasing demand for downstream polyurethane systems products and advances Dow's leading positions in attractive applications in construction, consumer, and industrial markets that are growing above GDP.

The new Freeport MDI facility will replace Dow's current North America capacity in La Porte, Texas, and will also be capable of supplying an additional 30 percent of product to Dow's customers. In coordination with the start-up of the new MDI facility, expected in 2023, Dow will shut down its polyurethane assets at the La Porte site.

“This MDI investment optimizes our existing asset infrastructure and enhances our global polyurethanes leadership position, further enabling us to support downstream systems customers’ growth,” said **Jane Palmieri**, president of Dow’s Industrial Intermediates & Infrastructure operating segment. “The back integration at the Freeport site creates a cost competitive supply of key upstream polyurethane raw materials, ensures a reliable supply position to support our growth in downstream high-value polyurethane markets and delivers a more sustainable production process.”

The new facility in Freeport will reduce Dow’s carbon footprint and water usage by:

- eliminating the need for the generation of thermal power by utilizing existing thermal energy from the Freeport site,
- reducing water intake and wastewater discharge (through production efficiencies), and
- eliminating the need for transport of raw materials.

Dow’s extensive Polyurethane Systems franchise upgrades key polyurethane components in order to produce rigid, semi-rigid and flexible foams, and coatings, adhesives, sealants, elastomers and composites for applications that range from industrial and infrastructure solutions, to consumer comfort solutions in flooring, furniture, bedding and footwear, to automotive solutions for vehicle interior, and energy-efficient insulation materials.

For more information, visit [www.dowpolyurethanes.com](http://www.dowpolyurethanes.com) and follow us on [LinkedIn](#).

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## Dow Receives Five 2021 Manufacturing Leadership Awards



Dow announced that it has been recognized with five Manufacturing Leadership Awards by the Manufacturing Leadership Council, a division of the National Association of Manufacturers. The awards are given to individuals and projects that have excelled in the advancement of manufacturing capabilities. Recipients are chosen by a panel of expert judges for results that have delivered outstanding examples of technology-driven leadership combined with a commitment to

innovation and improvement.

"We are so proud of the many talented people at Dow who continue to make significant contributions towards innovation and continuous improvement every day," said John Sampson, senior vice president, Operations. "This recognition is a true testament to those efforts as well as Dow’s constant pursuit of delivering greater value to all of our stakeholders."

The Manufacturing Leadership Council has recognized Dow for three significant project awards.

- **Dow’s Manufacturing 4.0** has received the Enterprise Integration and Technology Award. Dow Manufacturing 4.0 is a breakthrough initiative in Dow’s Operations strategy that is designed to improve productivity and competitiveness while driving continued growth and raising enterprise-wide performance. Digital is playing a critical role in helping Dow achieve its

ambition to become the world's most innovative, customer-centric, inclusive and sustainable materials science company. Dow is bringing together the best of Dow's people, processes, technology and data to create a seamless, and well-harmonized and that delivers greater value to our customers, employees, shareholders, communities and the planet.

- **The E2E Business Planning Program** was awarded the Supply Chain Award. The E2E program was designed to drive simplification and optimization at the enterprise level. This included improvement efforts that span from how Dow engages with its suppliers through to its customers, improving and simplifying Dow's business processes, systems, and organizations to enhance efficiency, deliver value, drive consistency and make it easy to do business with and within Dow.
- **Accelerating Innovation in Instrumentation & Sensors** at Dow Texas Operations received the Industrial Internet of Things Award. This project has accelerated the deployment of smart sensor technology across Dow's largest site at Texas Operations in Freeport, Texas and has utilized smart sensors to monitor key equipment and process parameters as well as deployed mobile tools for Dow's instrument and electrical personnel to use in the field. The smart sensor network better utilizes and digitalizes process information leading to improvements in reliability, productivity, asset utilization, and safety as well as has become a key component in connecting the digital thread of data flow.

Two members of Dow's team were recognized with individual awards.

- Billy B. Bardin, global digitalization director, was selected for the Visionary Digital Leader award. Recipients of this award are among manufacturing's most forward-thinking leaders. They are essential to ushering in manufacturing's digital era and they serve as a role model for their peers.

Bardin began his career with Dow in 2000 and has been instrumental in implementing Dow's digital journey. He has served in several research and manufacturing leadership roles, including most recently as global operations technology director and hydrocarbons, energy, and chemicals R&D director. Bardin has received past awards from the National Association of Manufacturers Manufacturing Leadership Council for work in talent development and advanced manufacturing. He was recently named as one of Smart Industry Magazine's Top 50 Industrial Digital Transformation Leaders and serves as Vice-Chair of the Board of Directors for MxD, a U.S. advanced manufacturing institute.

- Katherine Duggan, senior process automation engineer, was selected as a Rising Digital Star due to her work in the advancement and deployment of Dow's mobile worker technology. Recipients of this award are among manufacturing's brightest future stars and are leading the way for the possibilities of tomorrow.

Duggan joined Dow in 2013 as a Production Engineer at Dow's Croydon, PA Coatings facility where she led efforts to maintain stable, reliable, and safe operations. Since then she has served in several leadership roles within M&E and has been widely recognized for her leadership and technical contributions across Dow. Duggan has received two Dow Technology Center Awards, the highest award for technical contribution and commercialization of technology at Dow.

For more information on the Manufacturing Leadership Awards, please go to <https://mlawards.manufacturingleadershipcouncil.com/>.

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## Winding Up Towards a Sustainable Energy Future

### Collaboration as key to advancing efficient wind energy



At Dow, we are always looking for new ways to enable sustainability. Our recent collaboration with DowAksa has resulted in a new technology that supports the wind industry in its quest to achieve more with less.

The technology's revolutionary potential has already been recognized by the Business Intelligence Group (BIG) with an Innovation Award 2021 for breakthrough technology. We received the award in conjunction with DowAksa for creating the world's first commercial polyurethane-carbon fiber spar cap for a new generation of wind blades.

#### CHALLENGE

How can we help the wind industry decrease its Levelized Cost of Energy (LCOE) to accelerate our ability to supply more renewable energy in response to an ever-growing demand for power?

Energy captured by a windmill increases with blade length but, weight, tip deflection and installation costs rise accordingly, hindering progress. The key element of a blade structure is the load-carrying part – the spar cap. This part is fundamental as it bears all the wind forces and balances the bending of the blade.

We made it our goal to create a new spar cap technology that will maximize energy production efficiency to support the sustainable growth of green power. Here's what we've achieved:

#### SOLUTION

We collaborated with DowAksa to investigate how our joint capabilities could help overcome these challenges. The solution we came up with draws from the best of two worlds to combine polyurethanes and carbon fibers using a customized pultrusion process to create a stronger and lighter composite material for use in spar caps.

The main benefits of this technology are the creation of spar caps with superior mechanical properties and reduced weight, along with better productivity for manufacturers. Our combined pultrusion approach simplifies the blade manufacturing process, allowing the reduction of capital cost by up to 25%. This enables the wind industry to optimize their LCOE, furthering the growth of green energy for everyone.

This disruptive technology was made possible by the combination of Dow's history with material science, polyurethane chemistry and pultrusion processes, with DowAksa's expertise on carbon fiber technologies. By combining these two diverse but essential sets of expertise, we not only created a new technology but also a new way of approaching technical challenges in the wind industry.

**Together, we are stronger. Just like our blades.**

This project is one of many that demonstrates how we can achieve our collective goal of creating a better tomorrow if we work together. The development of this novel technology covers the gamut from chemistry to manufacturing hardware, showcasing how we can do more when we approach problems holistically. It demonstrates the power of science and its boundless potential in helping us build a more sustainable future.

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## **Retrofit Buildings at Tokyo 2020 Olympics Honor History and Environmentalism**



**Nine of the retrofit structures at the Olympic Games, Dow's materials science expertise helps power technologies that insulate, seal, connect, coat, protect, and deliver sustainable infrastructures**

Behind the scenes of the Olympic Games Tokyo 2020, Dow's materials science expertise helps power infrastructure technologies that insulate, seal, connect, coat, protect and deliver a sustainable legacy. More than half of the 43 Olympic venues are existing facilities, resulting in an estimated savings of 80,000 tons of CO<sub>2</sub> equivalent emissions<sup>1</sup>. Among the existing buildings, nine of those that are retrofitted deployed various Dow technologies to help elevate the performance and aesthetic of facades, building envelopes and electrical systems.

"To ensure retrofit facilities at Tokyo 2020 have the necessary performance level expected of a modern Olympic Games, the Tokyo Organizing Committee of the Olympic & Paralympic Games leveraged Dow's materials science expertise," said Mike Reed, vice president of Dow Sports Marketing Solutions. "The average lifespan of a building is 50 years, namely due to inevitable damage and wearing of the structure's skin or envelope. By working with our local customers to deploy Dow's innovative technologies to these buildings, we're able to help conserve and enhance existing structures, delivering sustainability gains long after the closing ceremonies."

The Olympic Games venues represent the proud heritage of Japan, the legacy of the Olympic Games Tokyo 1964 and the bright future of Tokyo's urban development. Although the Olympics Games, still to be called Tokyo 2020, have been postponed to July 2021, the focus on constructing an unparalleled Olympic experience for both fans and athletes continues<sup>2</sup>. Featuring a total of 43 venues – including 8 new permanent structures, 25 existing venues and 10 temporary sites – retrofit venues



at Tokyo 2020 honor their history and are reimagined to serve the city and its residents for the next decade and beyond.

Dow technologies are used in the following repurposed buildings:

- [Olympic Stadium](#)
- Olympic Village
- Equestrian Park
- Saitama Super Arena
- Kasai Canoe Slalom Centre
- Sea Forest Waterway
- Sea Forest Cross Country Course
- Nippon Budokan
- International Broadcast Centre and Main Press Centre

Nippon Budokan is one of three major venues originally built for the Olympic Games in 1964 that has been upgraded for Tokyo 2020. Known as the spiritual home of Japanese martial arts, structural protection of this important site is key. DOWANOL™ Glycol Ethers used in the water-based coatings system helps reduce damage from moisture, cracking and popping to keep the venue looking fresh. ELASTENE™ Elastomeric Wall Coatings help shield the exterior walls by providing excellent dirt and water resistance, while paint formulated with PRIMAL™ Acrylic Polymer is used to help protect the integrity of interior walls.

"Transitioning to a sustainable future is a business imperative for Dow, and as a materials science company, we have both the opportunity and responsibility to promote adoption of more efficient technologies," said Dr Hirokazu Shibata, technology & sustainability leader for Dow Sports Marketing Solutions. "It's no secret that the construction industry is one of world's largest consumers of both energy and resources<sup>3</sup>, and the decisions made today for the built environment will play a major role in the future of the industry. With technology solutions that exist today, like those incorporated throughout Tokyo's retrofitted venues, we can improve the energy efficiency of structures, reduce embodied carbon and help leave a positive legacy backed by the power of sport and science."

Of the 39 percent of carbon emissions that result from building and construction, 11 percent comes specifically from embodied carbon – or carbon associated with the upfront materials and construction processes throughout the whole building lifecycle. As such, retrofit of existing structures results in significant embodied energy savings when compared with new construction<sup>4</sup>.

Another retrofit example at Tokyo 2020 is the International Broadcast Center/Main Press Center which needed to be re-glazed both to enhance aesthetics and stabilize the structure. DOWSIL™ SE 797 Silicone Sealant is leveraged in the canopy/connecting corridor that links the International Broadcast Center with the Main Press Center, giving the glass façade a sleek look without metal frames. The silicone sealant has excellent adhesion and weather protection, and also helps absorb and relieve movement between the structure's elements to prevent cracks that could result from Tokyo's hot summer temperatures.

Dow solutions are also incorporated across several newly built Tokyo 2020 venues, including the Ariake Arena, Ariake Gymnastics Centre, Tokyo Aquatics Centre and many more.

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## Setting a New Standard of Measurement for CX in B2B

I never thought I would have the opportunity to debunk a myth. For a long time, many didn't see customer-centricity as a catalyst for business growth. Instead, it was seen as a concept — one that was very abstract and difficult to deliver, especially in the Business to Business (B2B) world.



Now, thanks to the diligence and perseverance of our global team and fueled by a cultural shift across the company, we embrace customer-centricity as a true asset and one of Dow's four [Ambitions](#).

We found a meaningful way to measure and deliver loyalty-building customer experiences that contribute to making collaboration and growth with Dow *easy, enjoyable, and effective*.

At Dow, we began our CX transformational journey in 2018, learning and building on Dow Corning's systematic approach to serving customers and scaled it to Dow's larger enterprise and extended customer base. We focused on listening to our customers through our annual survey, understanding their pain points using journey mapping, and acted quickly on their feedback. This has become our mantra of sorts; we follow this cycle to continue learning and improving.

We have now entered a point in our journey where we need to understand how our CX efforts measure in comparison to other organizations in our space.

And, after thorough exploration of practices throughout the advanced manufacturing and chemical sector, I kept coming up empty. A variety of CX measures do exist, but they mostly capture Business to Consumer (B2C) experiences. Those don't fit B2B because our customer journeys are different and often much more complex.

There is an opportunity to create a more universal, reliable benchmark for measuring CX in our sector that would enable us to drive improvements in the customer experience across the industry. A first step to get there was to create a space to discuss the approach with others in the value chain.

## Introducing a Customer Experience Consortium

Last year, Ernst & Young (EY) and Dow launched a [Customer Experience Consortium](#) that brings together stakeholders across the value chain to establish a common CX metric and shared methodology for measurement. Our goal is to establish a metric robust enough to function as a cross-industry benchmark, that has audit quality and can be reported to our own Board of Directors and the analyst community with transparency.

Internally, we recognized an important milestone when we announced our CX goals were to be integrated into our Environmental, Social and Governance (ESG) reporting to investors. It shows how CX is delivering more value for Dow, our shareholders, and, ultimately, all our stakeholders. Since we

can demonstrate that investing in CX enables growth and higher value, we can help this new sector wide CX metric deliver new-found value to our entire sector.

My colleague at EY, Bernard Kang, Pricing & Commercial Analytics practice leader, helped develop the advanced approach to measuring CX and launch this cross-industry consortium. Bernard shared that he is “excited about leveraging this collaborative approach to helping companies understand how they can measure CX and ultimately serve their customers more effectively.”

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## Dow Wins a Total of Six 2021 Edison Awards for Breakthrough Technology

*First company ever to receive five Gold Edison Awards in a single year*



Six breakthrough technologies from Dow have been selected from hundreds of nominees to be recognized with prestigious Edison Awards. Dow received five gold awards and one silver award in the categories of: Materials Science and Engineering; Manufacturing, Logistics & Transportation; and Sustainability, which were recently presented at the annual Edison Awards ceremony.

Established in 1987, the Edison Awards have honored the best in innovation and innovators. Being recognized with an Edison Award™ is one of the highest accolades a company can receive in the name of innovation and business success. Dow is the first company ever to receive five Gold Edison Awards in a single year and has won more gold awards cumulatively over the last decade than any other company.

[A.N. Sreeram](#), senior vice president, Research & Development, and chief technology officer, said, “Thomas A. Edison was one of the world’s greatest and most prolific inventors who had a tremendous influence on our modern-day lives. His inventions centered on market needs just like Dow’s do today. It is an honor to receive these namesake innovation awards, which recognize that Dow technologies solve customer and societal needs, simultaneously deliver product performance and sustainability, while also creating value for our shareholders.”

Learn more about Dow’s award-winning technologies below or visit [Dow Science & Sustainability](#) for more information.

**Gold - DOWSIL™ CC-8030 UV and Moisture Dual Cure Conformal Coating** won a gold award in the Manufacturing, Logistics & Transportation Materials for Manufacturing subcategory. DOWSIL™ CC-8030 UV and Moisture Dual Cure Conformal Coating is the first to combine innovative polymer technology with the sustainability of room temperature cure by primary ultra-violet (UV) cure and a secondary moisture cure. CC-8030 is a one-part solventless 100 percent silicone conformal coating that offers high reliability protection of sensitive electronics and can be applied quickly and efficiently by automated processing.

**Gold - DOWSIL™ TC-5515LT Thermally Conductive Gap Filler** won a gold award in the Manufacturing, Logistics & Transportation Thermal Conductivity subcategory. DOWSIL™ TC-5515LT makes electric vehicle (EV) batteries better. High power batteries require effective thermal

management. TC-5515LT provides heat transfer to keep EVs operating safely with maximum range and lifetime. Optimized for ease-of-use and long-term reliability, the product benefits leading auto manufacturers and consumers.

**Gold - DOWSIL™ TC-3065 Thermal Conductive Silicone Gel for 5G Optical Access**

**Infrastructure** won a gold award in the Engineering & Material Science Thermal Conductivity & Heat Treatment subcategory. DOWSIL™ TC-3065 provides thermal dissipation for the optical interconnects vital to 5G telecommunications and data communications. Error rates are significantly reduced and device lifetimes extended in these demanding applications.

**Gold - DOWSIL™ VE-8001 Flexible Silicone Adhesive by Dow** won a gold award in the Engineering & Material Science Adhesives subcategory. VE-8001 is designed for foldable and rollable consumer electronic devices. Once cured by heat, it shows superior folding durability performance, which provides stable mechanical properties even after folding tests. The high tensile strength and appropriate elongation help to dissipate the stress that is generated during the bending and folding of the devices.

**Gold - RHOBARR™ 320 Polyolefin Dispersion** won a gold award in the Sustainability Environmentally Friendly subcategory. RHOBARR™ 320 Polyolefin Dispersion enables sustainable coated paper goods. Applied as a thin coating from an aqueous dispersion, it provides barrier to liquids/grease using up to 70 percent less raw material compared to extrusion coated products, allowing paper coaters to produce more sustainable, more recyclable food service items and packaging.

**Silver - DOWSIL™ Crystal Clear Spacer** won a silver award in the Engineering & Material Science Adhesives subcategory. A new technology enables the manufacture of crystal-clear silicone spacers that can be applied on substrates and develop durable adhesion. This unique feature was patented and used to create energy-efficient transparent refrigerator doors. Our invention reduces production cost and enhances the aesthetics and durability of refrigerator doors.

Learn more about the Edison Awards program and past winners by visiting: [www.edisonawards.com](http://www.edisonawards.com).

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**Lighter, Safer, More Comfortable Bedding and Furniture Foams Powered by VORASURF™ Surfactants Innovations**

- *Enable low density, lightweight foams*
- *Address mattress-in-a-box, at-home delivery market trend*
- *Help meet key specifications for low volatile, fire retardancy, blowing agents*

Today, Dow, the world's leading materials science company, introduces innovative low cyclic, low volatile VORASURF™ Silicone Surfactants to help its customers address growing market interest in lightweight flexible foams.



“As more and more consumers pivot towards the online mattress-in-a-box ordering experience, which offers more customizable products delivered right to their homes, formulators are looking for more advanced cell control solutions that deliver lightweight, low emissions, and high comfort memory and conventional foams,” said Justin Weare, global marketing manager for Polyurethane Additives at Dow. “Not only is the development of lightweight foams critical to meeting current market needs, but an added benefit of these foams relates to sustainability. Weight reduction indeed allows for reduced carbon emissions associated with transport and delivery to the consumer, improved resource efficiency, and waste reduction. Today’s innovations go the extra mile, helping customers transition to auxiliary blowing agents, address fire safety requirements, and minimize volatile organic compounds emissions.”

Highlighted VORASURF™ Surfactant products include:

- [VORASURF™ FF 5955 Additive](#): a polyurethane surfactant innovation enabling higher air flow, better aeration, EO-rich, viscoelastic or hypersoft foams for more lightweight, high-comfort bedding and furniture applications
- [VORASURF™ DC 5188 Additive](#): a new surfactant compatible with very low to low density (under 15 kg/ m<sup>3</sup>) continuous slabstock and box foam for furniture applications, particularly suitable for cost-driven markets
- [VORASURF™ FF 5959 Additive](#): a next-generation solution particularly suitable as a co-surfactant to decrease the dosage of cell opener in a formulation, offering finer control over the cell size and foam recovery and pneumaticity properties in viscoelastic foams
- [VORASURF™ FF 5955 Additive](#) also offers good performance with auxiliary blowing agents, offering new choices of surfactants to help formulators transition towards low ozone depleting potential (ODP) and low global warming potential (GWP) options, including carbon dioxide.

In addition to resource efficiency, transportation cost, and carbon emissions benefits, lower density, high comfort foams also bring tangible productivity benefits to customers by increasing production yield and reducing costs.

Dow’s technical service and development specialists Sophie Perilleux and Dario Manzini will present the specifics of these innovations and showcase their performance attributes in bedding and furniture foam applications during a webinar on Tuesday, May 18, 2021 at 9:00 a.m. Eastern Time. Participants are invited to [watch the replay](#).

Dow has collaborated with the polyurethane industry for decades, offering formulators a wide portfolio of solutions, including silicone performance additives, surfactants, and release agents. Formulators around the world also have access to technical support and innovation capabilities to tailor Dow’s advanced, customizable polyurethane additives to address specific performance, sustainability and profitability objectives. For more information about Dow’s silicone polyurethane surfactants portfolio, visit [www.dow.com/vorasurf](http://www.dow.com/vorasurf).