2022 ROTATIONAL MOLDERS RANKING

1. **Tank Holding Corp.** $550 MILLION*
2. **Myers Industries Inc.** $220.8 MILLION
3. **Toter LLC** $180 MILLION*
4. **Centro Inc.** $170 MILLION*
5. **Step2 Discovery LLC** $165 MILLION*
6. **Little Tikes Co.** $155 MILLION*
7. **Pelican Products Inc.** $125 MILLION*
8. **Moeller Marine Products Inc.** $60 MILLION *
9. **Den Hartog Industries Inc.** $55 MILLION
10. **Confluence Outdoor** $50 MILLION*

**PLASTICS NEWS* ESTIMATE

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Plastics News

August 22, 2022 ▶ PlasticsNews.com

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Minnesota Diversified invests $3.2M to add PP sheet extrusion

A nonprofit manufacturer with inclusive hiring practices expects to create 75 jobs over 10 years as a new polypropylene extruder brings "tremendous opportunity."
Minnesota Diversified Industries Inc. photo

By Catherine Kavanaugh
Plastics News Staff

Packaging producer Minnesota Diversified Industries Inc. (MDI) invested $3.2 million into a new extruder and related upgrades that is expected to create 75 new jobs over the next 10 years for the nonprofit social enterprise company.

Based in Minneapolis, MDI produces polyethylene and polypropylene boxes, totes and trays for the medical, food, agriculture, logistics, manufacturing, and warehouse and distribution markets at manufacturing plants in Grand Rapids, Hibbing and Cohasset.

Founded in 1964 as an occupational training center for high school students with disabilities, the center took its first step into contract manufacturing in 1973 after receiving work from a federal agency and 3M Co. The training center was renamed Minnesota Diversified Industries in 1976 and has continued to serve people with developmental and physical challenges through inclusive hiring practices.

Annual sales are about $35 million with accelerated growth over the last several years into commercial markets, MDI Sales Vice President Barbara Majerus said in a phone interview. The customer base now includes many brand names and

See **MDI**, Page 19

Pregis to close Kentucky plastic sheet foam plant

By Frank Esposito
Plastics News Staff

Lack of a key raw material is leading Pregis Corp. to close a plastic sheet foam plant in Kentucky in a move that will eliminate 79 jobs.

The plant in Wurtland, Ky., makes Microfoam-brand PP sheet foam. The plant is expected to close by the end of the year, company officials said in a WARN (Worker Adjustment and Retraining Notification) filed with the state.

In a statement sent to *Plastics News*, officials with Pregis in Deerfield, Ill., said that "the regretful decision to close … is due to the discontinuation of a key ingredient" needed to make the sheet foam, which is the only product made at the site.

The company did not specify what the ingredient was, saying "we are not at liberty to divulge information on the supplier name or ingredient."

"Despite exhaustive efforts to find a suitable

See **Pregis**, Page 30

DOJ files charges in ABC worker death

By Steve Toloken
Plastics News Staff

The U.S. Department of Justice filed criminal charges Aug. 15 against ABC Polymer Industries LLC, alleging that the company broke the law in a 2017 incident in which an employee was pulled into an unguarded extrusion line and killed.

The department said in a statement that the Helena, Ala.-based company had a "standard practice" of operating machinery with a guard in the up position, which resulted in an employee reaching into the equipment to clear a jam and getting pulled into spinning rollers.

"Despite knowing of numerous prior worker injuries from using that machine without the safety guard engaged, ABC Polymer assigned the victim to cut tangles out of plastic sheeting from among the machine's unguarded spinning rollers with a hand tool," the DOJ statement said. "The worker became entangled in the spinning rollers and was killed."

A lawyer for the company denied the government's complaint.

"Every employee death in an industrial accident is a tragedy, but it is not always a crime," said Erica

See **ABC**, Page 27

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NEWSCLIPS

Altium pulls off expansion with acquisition

Atlanta — Altium Packaging LLC, already a major player in plastic bottle blow molding, is acquiring Plastic Industries Inc., a New Hampshire-based company with a network of nine plants across the U.S.

Plastics Industries makes high density polyethylene and PET bottles for applications including dairy, juice, water and drinkable yogurt. The company also manufactures food containers from 3.4 ounces to 5 quarts for foodservice and retail markets for items such as dressings and sauces, marinades, condiments, syrups, flavorings and vinegar. Other markets include industrial chemical, health care and maple syrup.

The company's Sugar Hill Containers unit makes distinctive plastic maple syrup containers in a variety of sizes.

Plastics Industries has locations in Corona and Fresno, Calif.; Hebron, Ky.; Janesville, Wis.; Mansfield, Texas; Newark, Del.; Poland, Maine; Reading, Pa.; and Turners Falls, Mass.

Altium Packaging also acquired Andersen Plastics near Portland, Ore., the company said.

Altium, based in Atlanta, is the former Consolidated Container Corp. The company is the fourth-largest blow molder in North America, according to *Plastics News* data, with annual estimated sales of $1.55 billion. The company had an estimated 63 locations prior to these latest deals, according to the ranking.

Buyer plans investment in Avient distribution

Miami — Private equity firm HIG Capital has plans to grow Avient Corp.'s distribution unit, which it is acquiring for $950 million in cash.

In a statement to *Plastics News*, Robert Jang, managing director with Miami-based HIG. said the firm "is thrilled to be investing in the preeminent distributor of thermoplastic and thermoset resins and additives."

"Looking ahead, we plan to accelerate investments in commercial sales, technical support, operations and digital solutions to drive further value for customers and supplier partners," he added.

The deal was announced Aug. 12. The business, one of North America's largest resin distributors, posted 2021 sales of $1.63 billion and distributes resin and compounds for 21 suppliers, including Dow Inc., BASF SE and LyondellBasell Industries.

Market watchers told *PN* that Avient may have sold the unit to HIG because, unlike a competitor, HIG doesn't have any existing relationships with material suppliers that could be complicated by combining two similar businesses.

Vixen Composites opens larger facility

Elkhart, Ind. — Vixen Composites has moved into a new, larger facility in Elkhart.

Company officials said in a news release that the new location can handle additional capacity for Elkhart-based Vixen's fiberglass-reinforced plastic (FRP). The new location covers 60,000 square feet, with both office space and warehouse facilities.

The location was chosen for its centralized location to the RV industry, which has many companies with facilities in Elkhart.

"When looking for the new space … we wanted to keep that close connection with our customers in the RV industry," General Manager Mark Brunner said.

Vixen was founded in 2010 and has been owned by RV products supplier Airxcel Inc. of Wichita, Kan., since 2016. Interest in Vixen's FRP and composite panels has steadily expanded in the RV community and specialized markets, officials said.

"With Airxcel's support, we've been able to invest in growth, rather than scaling back, ensuring that in the future we're set up to better meet the needs of our OEM customers and take advantage of new opportunities as they arise," Brunner said.

Core Industrial's CGI Manufacturing renamed

Chicago — Core Industrial Partners LLC paused its acquisition tear long enough to announce Aug. 18 it is changing the name of its CGI Manufacturing Holdings portfolio business to Cadrex Manufacturing Solutions.

Core Industrial, a Chicago-based private equity firm, and Cadrex have purchased eight add-on companies in recent years. The name change is designed to unify the units under one brand that offers injection molding, computer numerically controlled machining, laser cutting, sheet metal fabrication and fastener insertion, among other services.

Romeoville, Ill.-based Cadrex's markets include energy transmission, medical information technology, aerospace and defense, materials handling, electronic gaming and food production.

Cadrex's most recent acquisition was injection molder Tenere Inc. of Dresser, Wis.

Salona Global buys molder DaMar Plastics, has deal for another acquisition in hand

By Sarah Kominek
Plastics News Staff

Salona Global Medical Device Corp. will acquire injection and blow molder DaMar Plastics Manufacturing Inc. and also said it will buy the rehabilitation and sport medicine device assets of an unnamed company "as quickly as possible."

Salona plans "to retain the DaMar staff and leadership as is," Jethro Rothe-Kushel, vice president of capital markets and financial communications at Salona, told *Plastics News* in an email.

"We look forward to welcoming the DaMar Plastics team into the Salona Global family. Plastics are an integral part of Salona Global's current business," Salona CEO Luke Faulstick said in an emailed statement. "Through vertical integration, we expect this acquisition will continue to improve our gross margins while further expanding our customer base, revenue streams and bottom line."

Faulstick

The medical device assets have "unaudited annual revenues of $26 million with gross margins in excess of 30 percent," an Aug. 15 news release said. El Cajon, Calif.-based DaMar Plastics, which serves the medical and consumer industries, has $6.38 million in annual sales, it said, with 47 percent gross profits.

The acquisition of DaMar "builds upon the [Salona's] strategy to create a fully integrated global medical device company and would add precision plastics technology capabilities to the company," the release said.

"These deals together, if closed, would increase our revenues by over 60 percent, to over $80 million a year, while maintaining gross margins above 30 percent," Faulstick said in the release.

"We're intent on closing both of these deals as quickly as we can, and we are fortunate to have managed our balance sheet such that we don't have a need for equity financing to close them," Salona Global Chairman Les Cross said in the release. "We continue to work to drive our five engines of revenue and profit growth bringing more momentum to our fast-growing company: acquisitions, internal sales force recruitment, product development, in-licensing product IP and sales distribution agreements."

A letter of intent to acquire the unnamed rehabilitation and sports medicine device maker, announced at the same time as the DaMar deal, did not specify what processes that company may do.

"Between the cash on the balance sheet and debt financing in place from an existing U.S. lender, SGMD has sufficient funds to close both acquisitions without any equity financing," the release said.

Global Supply adds injection molding with Innovative Plastics

By Catherine Kavanaugh
Plastics News Staff

Campbell, Calif.-based Global Supply LLC acquired the business assets of Innovative Plastics, which was in Murrieta, Calif., to offer injection molding capabilities for the first time and support the development of new and existing products.

Founded in 1987, Global Supply manufactures and distributes electronic fasteners, interconnects, hardware, thermally conductive materials, test and measurement equipment for customers that include original equipment manufacturers and contract manufacturers.

The Innovative Plastics acquisition is part of a strategic plan to add new brands and manufacturing capability for electronic fasteners and interconnects, according to Global Supply President Lance Archer.

Through the purchase, Global Supply acquired multiple injection molding machines with clamping forces up to 90 tons; hundreds of propriety injection molds for electronic, electrical, aerospace and utility products; and intellectual property for specialty over-molding in the automotive and utility industries, Archer said in an email.

No terms were disclosed.

Innovative Plastics was a small manufacturer with distribution through companies such as Bossard and Bisco Industries. The owner and founder will continue as an adviser for operational and technological requirements, Archer said.

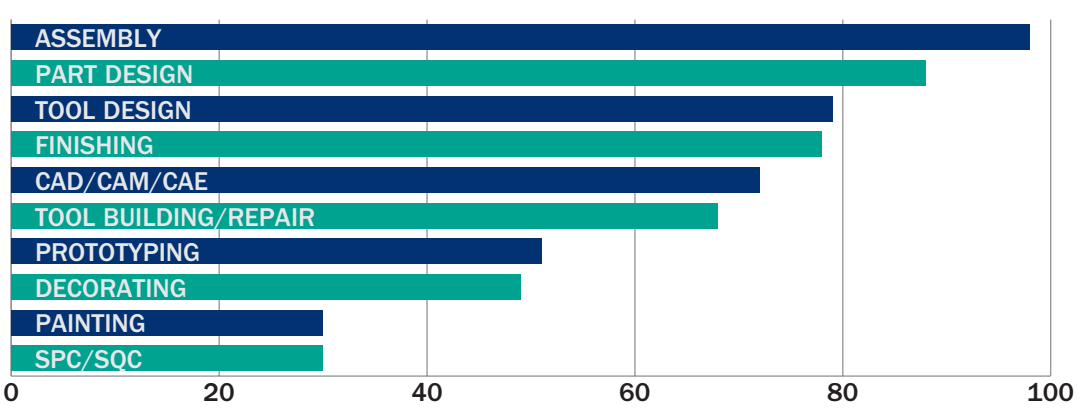
Global Supply will use its new injection molding capabilities to add products to its TekNational

See **Global Supply**, Page 30

Plastics News FYI

2022 ROTATIONAL MOLDERS RANKING

TOP SECONDARY SERVICES



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Evergreen Plastics bullish on PET recycling

By Jim Johnson
Plastics News Staff

Austin, Texas — Improvements at Evergreen Plastics Inc.'s Riverside, Calif., PET recycling facility will allow for the wider use of curbside collected material as the company looks to expand the facility's reach.

Former owner CarbonLite Holdings LLC originally designed Evergreen's plant to focus on the ultra-clean PET stream created through California's bottle deposit scheme. But improvements at the facility will allow Evergreen to soon also accept and process PET bottles sourced from out-of-state curbside collection programs that typically contain more contamination than bales created from bottle deposit containers.

"Ninety-six percent, 97 percent of what we're running there is Grade A deposit bales. Occasionally if we get really high-quality curbside we can run it there. We just don't have the redundancy built into the system," said Scott MacLaren, a partner at private equity firm Sterling Group, controlling shareholder of the company.

California grades plastic bales based on how the material is sourced, with Grade A only including bottles collected through state-certified recyclers and considered the best available.

"It wasn't us that built the plant. Let's be clear about that. When we bought the plant we had done the analysis and wanted to upgrade the front end. That's been our plan from the very beginning," MacLaren said at the Resource Recycling Conference in Austin.

Evergreen acquired the Riverside plant in 2021 after CarbonLite sought bankruptcy protection.

"We will be able to run selectively some curbside bales there because we do have a desire to bring in some curbside if we can

> **"It wasn't us that built the plant. Let's be clear about that. When we bought the plant we had done the analysis and wanted to upgrade the front end. That's been our plan from the very beginning."**
>
> Scott MacLaren
> Sterling Group

from Arizona, from Nevada, from Utah," MacLaren said. "We are upgrading our entire front-end system there. Everything prior to wash will be upgraded.

"It's a pretty significant investment for us to do that. To run curbside you need significant redundancy in your system just because you have the contaminants. It's a challenge, for sure," he said.

Curbside collection chiefly relies on a single-stream recycling approach where recyclables such as plastics, glass, paper and metal are commingled in one cart. That approach makes it easier for residents to recycle, but it puts more of a burden on material recovery facilities that then have to sort those materials. Cross-contamination of recyclables is much higher in bales created by MRFs handling single-stream materials, but the trade-off has been that much more material gets diverted from landfill disposal because of consumer ease of use.

But Evergreen is familiar with challenges created by single-stream recycling systems as the company also operates a recently expanded PET recycling plant in Ohio where there is no beverage container deposit system. The Clyde site, which recently underwent its own expansion, sources PET bales from around the country.

MacLaren explained that upgrading the California plant to be able to handle PET bales from western states makes more sense than transporting them to Ohio.

Evergreen also has PET recycling plants in Albany, N.Y., and Amherst, Nova Scotia, acquired earlier this year that both rely on bales from bottle deposit states.

Some 90 percent of Evergreen's overall output consists of pellets and 9 percent is flake. The remaining 1 percent includes both caps, primarily made of high density polyethylene, and labels that the company sells to other processors.

The company also has desires to expand beyond its current footprint, but no decisions about where have been made. "We have this debate every day," MacLaren said. "We're just not sure where."

An area where Evergreen sees less potential to expand, he did say, is the Southeast, where much of the existing PET supply is locked down by polyester fiber makers in both the textile and carpet industries.

Evergreen is so bullish on the recycled PET because of state-level laws now requiring minimum recycled content in packaging as well as general market conditions.

"We see where the market is going to hit these minimum content requirements. It's not just legislation; it's also the brands. We're seeing a legitimate desire from the brands to increase recycled content. They get it. Consumers are looking at their bottles; they are looking at their packaging and are making a choice," MacLaren said.

"I think that only increases. I think the brands think that only increases and in order to get to where they need to be, we're going to need more capacity in the U.S., that's for sure. For us, we're happy to be the player that can help do that," he said.

Chemical recycler: Recycling needs to prove viability

By Jim Johnson
Plastics News Staff

Austin, Texas — Eric Hartz did not quite say it's time for the chemical recycling sector to put up or shut up. Not those words, exactly.

But the president of Nexus Circular LLC told the crowd at the Resource Recycling Conference in Austin that the sector needs to deliver on promises.

"We, the industry of advanced recycling and specifically pyrolysis, we just have to deliver. We have to perform," he said during an Aug. 16 conference session exploring chemical recycling.

"The burden is on us to build plants at scale that work. And that's really what has to happen. I do think, unfortunately, there's a lot of news that floats around this space. There's a lot of promises made," he said.

And promises unfulfilled.

"I don't think there's ill will. I don't think it's malicious. I just think they are hopeful. And we need to break that pattern," Hartz said. That pattern has been long on promises and short on solutions over the years as those who venture into the space discover the difficulties of actually turning a profit.

Pyrolysis uses heat and pressure in the absence of oxygen to convert used plastics into constituent molecules that can be reconstituted again into plastics. Pyrolysis, and not just for plastics, has been around for decades.

Many companies have poured millions of dollars into trying to make the process practical and profitable.

Nexus, Hartz said, has cracked the code with its approach, keeping costs down to the point that he believes his company will succeed even when the chemical recycling output grows to such a scale that commodity pricing takes hold.

"The bottom line is there is a price premium today. Why? Supply is minuscule. Demand is enormous," Hartz told the crowd. "We are not in a commodity market right now. We are in a specialty market. So prices reflect that. But the other thing is there is very little volume right now. So that disparity can go away."


Plastics News photo by Jim Johnson

Nexus has designed its approach "to make the highest-quality product to extract the highest price. But we need to be low-cost, long term. Because if everyone succeeds at this in a commodity world, the low-cost player is who wins," he said.

"Today there is a price difference, but it's all in the supply and demand. We predict that for quite some time there will probably be this price disparity," Hartz said.

> **"Today there is a price difference, but it's all in the supply and demand. We predict that for quite some time there will probably be this price disparity."**
>
> Eric Hartz
> Nexus Circular LLC

The company already makes what Hartz has called commercial qualities of pyrolysis oil at a plant in Atlanta that is then sold to other companies that drop it into their processes to make new plastics. Nexus also recently unveiled separate plans with Braskem and Dow to site other pyrolysis locations in the Chicago area and Dallas.

OSHA seeks $177K fine after worker burned at packaging firm

By Steve Toloken
Plastics News Staff

The Occupational Safety and Health Administration is proposing fines of $177,000 against plastic packaging firm International Cushioning Co. LLC, after a worker was hospitalized with serious burns and investigators said the company did not properly report the incident.

In an Aug. 15 news release, OSHA said it learned about the February accident at the company's Fremont, Ohio, factory from the local fire department, and it publicly questioned the company's workplace safety culture.

"This company must address what appears to be a workplace culture where employee safety is not emphasized and workers are exposed to serious injuries," said Todd Jensen, area director of OSHA's Toledo, Ohio, office.

In the Feb. 10 incident, the agency said a 25-year-old worker was removing polyethylene foam from an extrusion line when static discharge ignited isobutane, a colorless gas released during production, and the heated foam melted on the employee's arm, causing second-degree burns. The company, based in Marlboro, N.J., did not respond to a request for comment.

OSHA said its investigators found 25 violations of federal safety rules in two separate inspections — one in February for the incident and a follow-up health inspection in early March. Those alleged violations include failing to report an injury within 24 hours, as required, operating machinery without safety guards, not following lockout/tagout regulations and failing to properly train employees, OSHA said.

"A young worker might have been spared these serious injuries if International Cushioning Co. met specific federal standards for the safe operation of foam manufacturing equipment," Jensen said in a statement. "During our initial inspection in Fremont, inspectors found additional issues and identified more than two dozen violations and related hazards the company must address before other employees are harmed."

OSHA said it learned about the accident in a referral from the local fire department "alleging fire hazards due to poor housekeeping of combustibles and flammables." The agency said its inspectors found that industrial fans positioned on the foam line were not properly rated for use in hazardous environments and the company failed to provide workers with spark-resistant hand tools for fire ignition situations.

International Cushioning also failed to provide adequate personal protective equipment for workers' hands, arms and feet, OSHA said. Additionally, the company was cited for not having a hearing conservation program or an emergency action plan.

According to its website, International Cushioning makes several types of paper and plastic packaging products, including PE foam, polystyrene foam and loose fill packaging, as well as expanded polystyrene beads. The company has manufacturing operations or facilities in Indiana, New Jersey, North Carolina and Texas, according to its website. OSHA said it opened the Fremont facility in 2020.

These are not the first violations OSHA said it filed against the Fremont plant. Agency records show that OSHA fined the Ohio operation $18,000 last year for violations of regulations around fire extinguishers, hazard communications, general machinery standards and lockout/tag-out after it opened an investigation in June 2021 in response to a complaint.

The company has 15 days to formally respond to OSHA.

International Cushioning Co.'s Fremont plant.
Ohio Economic Development Association photo

OSHA said its investigators found 25 violations of federal safety rules in two separate inspections.

VIEWPOINT: HOLLEE KELLER

More is the word on rotational molding

What's the word on rotational molding? More.

For rotomolders, this year's ranking research for fiscal 2021 shows, well, more. Like larger volumes and higher prices. The average sales per company is up 15 percent. Polyethylene pricing was up 17.5 percent, contributing to material costs pass-through gains. The total related sales for our 106 ranked firms is $2.9 billion, up 14 percent from last year.

Proprietary molding takes the largest share, which is what we expected, with 55 percent of the total sales, representing the brands that make products like tanks, carts, toys, kayaks and playground equipment. Our 1999 ranking had this group at 62 percent of the total. Custom molding runs close behind with 41 percent of this ranking's total sales.


Keller

Captive molding comes in at just under 5 percent. This group represents those manufacturers who rotomold a component or part of their finished product, like machine housings. This is the most difficult sector to explore because most firms don't consider themselves rotomolders.

So, what's the biggest news?

Tank Holding Corp. acquired Dutchland Plastics LLC earlier this year, giving Tank the largest dollar gain in our ranking.

Ranked at No. 4, Centro Inc. has a new plant in Iowa, expecting production to start next February.

Custom rotomolder Solar Plastics LLC, which ranked at No. 11, has started up production in Monterrey, Mexico.

Who are our biggest movers?

Atlas Molding LLC of Leola, Pa., moved up 28 spaces to rank at No. 51.

CPI Products of Port Washington, Wis., moved up 25 spaces to No. 60. The industrial molder also holds our biggest percentage gain at 183.3 percent.

PW Aire Technologies of Olivet, S.D., moved up 22 spaces to No. 54.

Redline Plastics LLC of Manitowoc, Wis., moved up 16 spaces to rank at No. 40.

Horizon Manufacturing Group LLC of Lake Mills, Wis., moved up 14 spaces to No. 26.

Johnson Outdoors Inc. of Racine, Wis., moved up 12 spaces to No. 21.

EnviCor Enterprises LLC of Smithfield, N.C., moved up 10 spaces to rank at No. 42.

GVL Polymers Inc. of Litchfield, Minn., moved up 10 spaces to rank at No. 50.

Diversified Plastics Inc. of Latta, S.C., moved up nine spaces to No. 32.

Some 39 more rotational molders are included online as directory-only listings. While we don't have ranking data for these yet, they are still added to our listings.

Make sure to check out our website for the full listing, at www.plasticsnews.com/rotomolders. The data, as a spreadsheet download, is available to data-level subscribers. For details, send a note to research@plasticsnews.com.

If you work for a company that is missing from the ranking, we would like to include you next time. Just send a note to Hollee Keller at hkeller@crain.com or mail your information to Plastics News, P.O. Box 790, Tallmadge, Ohio, 44278.

Keller is the editorial research coordinator for Plastics News *and author of the All Things Data blog. Follow her on Twitter @holleekeller.*

PERSPECTIVE

As ICE age ends, demand for EV engineers heats up

LINDSAY CHAPPELL is news editor at *Automotive News*.

Maybe there was a time when the auto industry had all the engineers it needed. But if so, that was a while ago.

The industry has been bemoaning the shortage of engineers at least since the dawn of this century.

Automakers are remaking product portfolios to load them up with battery-powered electric vehicles that need new components and materials. Suppliers are perfecting catalogs of new technologies for advanced safety, automated driving and connectivity. And to do all that, they need engineers in disciplines that didn't used to be critical, including mechatronics, electrical and software — lots of software engineers.

In Traverse City, Mich., this month, at the Center for Automotive Research's annual Management Briefing Seminars, it didn't take much prompting to get executives to tell us that they've got unmet engineer needs. It's a source of stress across the industry.

The big French supplier Faurecia completed its $6 billion takeover of Hella in January, renaming itself Forvia. Speaking to an MBS audience, Matt Myrand, Forvia's director of advanced manufacturing and supply chain, said it was no coincidence that Hella happened to have hundreds of software engineers on its payrolls.

Forvia now has 150,000 employees, including 2,600 software engineers.

You win the poker hand, you get all the other guy's chips.

Ed Frutig, vice president of business development at international consulting firm Ricardo, told us the issue isn't merely "finding" engineers — it's finding engineers who are trained for EVs, batteries "and even fuel cells."

But the big engineering schools are not yet meeting this challenge, he said. "They've got graduates coming through the pipeline, but they're not showing up yet."

Denso told us that it's attempting to home-grow engineers in additional fields — reskilling its mechanical engineers for the new era, said Dan Ronayne, Denso's director of engineering for powertrain.

"What we want are mechanical engineers who also understand the other side," Ronayne told us. "Things are still going to break and we'll still need mechanical engineers to fix things. But everything has a chip in it now, and everything has software in it now. We want them to be able to fix both parts."

It will be interesting to see if foreign nationals can bail out the industry.

Over the past few decades, engineers have come to the U.S. from around the world — India, Pakistan, China, Mexico, Africa, Vietnam — to fill empty chairs at automotive companies. They often came on a kind of visa that allowed them to work at a skilled job and stay for up to six years without having to officially immigrate.

That program was suspended

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Some state lawmakers push national EPR conversation

By Bridget Janis
Plastics News Staff

With four U.S. states passing extended producer responsibility laws for packaging and plastics in the last year, some lawmakers and advocates hope those actions will build support for a national approach.

On a recent webinar organized by the Product Stewardship Institute, several state legislators closely involved in EPR policy looked at laws that have passed in Maine, Oregon, Colorado and California, and they pointed to what could be next.

In Washington state, where packaging EPR legislation was introduced but did not pass, Sen. Mona Das, D-Kent, sees the states that are going first as setting standards for others and edging the U.S. toward a national conversation. "It all ties together, so every state that passes a plastic bag bill or a bottle bill or a [foam] bill or an EPR bill, eventually all states, their national people are going to want something uniform nationally," she said. "That's the goal."

Das

Boston-based PSI, which advocates for product stewardship legislation in industries including paint, electronics and mattresses, said in a summary of the webinar that it has seen EPR policies be harmonized nationally in some industries but not in others.

"Through PSI's experience with EPR in other product areas, we have seen firsthand how national harmonization can streamline and simplify programs," the group said. "A great example of this is paint where all 11 laws are based on a similar model; a counterexample is electronics, where fragmentation has led to ineffective programs, although we are working to update many of them."

PSI said it does not yet see national harmonization around packaging and plastics EPR, in part because different industries cannot agree on a common approach and because states have very different recycling systems and needs.

In Maine and California, for example, municipalities and community-run programs wanted more of a reimbursement model for their existing programs in the EPR law, PSI said. But in Colorado, with fewer locally run programs, a different "full EPR approach" was needed, PSI said.

Colorado State Rep. Lisa Cutter, D-Jefferson, said she hopes that lawmakers in different states can coordinate to have some consistency across the country.

"We're hoping to stay in connection with all of you pursuing policies in other states so that we can do whatever we can, at the state level, to be consistent for others to follow along," Cutter said, in response to Das' comments about driving national laws.

One EPR bill for packaging has been introduced in Congress, as part of the Break Free From Plastic Pollution Act, in 2020. But that legislation has not advanced in Washington.

> **"We saw an opportunity through that zero-waste committee to go from terrible, terrible recycling systems to really becoming a leader, a regional leader in that area."**
>
> Lisa Cutter
> Colorado State Representative

PSI said it has tried to build support for a more national approach by working with the Flexible Packaging Association in 2020 to develop model EPR legislation, one of the first times in the packaging sector that an industry group formally backed EPR.

Cutter said she considers it important that Colorado's law, which passed in May, includes a circular economy development center.

"I think that's really important, that goes hand in hand with our extended producer responsibility bill," Cutter said. "We saw an opportunity through that zero-waste committee to go from terrible, terrible recycling systems to really becoming a leader, a regional leader in that area."

In Maine, which became the first state in the U.S. to pass a packaging EPR law last year, one lawmaker said it's also important for a more national conversation about what is recyclable and compostable.

"I do think it would be very appropriate to have an overarching set of standards that we could work from," said state Sen. Nicole Grohoski, D-Ellsworth.

She told the webinar that Maine legislation had support from some industries and that proved important to passing it.

"We were lucky there was a lot of producers in the state who supported us," Grohoski said. "Breweries in particular, they have experience with our bottle bill; they understood what it would mean to be responsible for the rest of their type of packaging."

In Maryland, where legislation is being considered, state Del. Sara Love, D-Montgomery, said it's important to build industry backing. "Industry support was really important and will continue to be important as we move on," Love said.

Tank maker Fortlev taps into greener fuel for production

Avi Brenmiller, president and CEO of Brenmiller Energy, left; Daniel Zonshine, ambassador of Israel in Brazil; and Antonio Torres, CEO of Fortlev Solar, stand in front of Brenmilller's thermal energy storage unit. Fortlev photo

By Catherine Kavanaugh
Plastics News Staff

Fortlev Indústria e Comércio de Plásticos LTDA, a water tank, pipe and connectors producer based in Anápolis, Brazil, is operating the plastics industry's first facility using thermal energy instead of natural gas to heat the air for its rotational molding machines.

Crushed volcanic rocks are part of a thermal energy storage (TES) unit developed by Rosh Haayin, Israel-based Brenmiller Energy to serve as a zero-carbon alternative for manufacturers.

The bGen-brand TES unit uses biomass to heat crushed rocks to more than 600°C (1,112°F) to deliver hot air to the company's molding machines for polyethylene water storage tanks at its headquarters site.

Fortlev's bGen unit is the first TES system in the world powered by renewable energy for generating hot air for manufacturing plastic products.

"The rocks are the storage media used to store the heat. It is a type of volcanic rock. The biomass, in the form of wood pellets, is the source of energy used to charge the storage," Brenmiller CEO Avi Brenmiller said in an email.

Neither company is disclosing the cost of the project, which received direct funding and in-kind donations from the Israel Innovation Authority and the Brazilian Agency for Industrial Research and Innovation.

Founded in 1989, Fortlev produces tanks from 100 to 15,000 liters, PVC pipes and connections for cold water applications, PVC corrugated conduit and PVC roof tiles at eight manufacturing facilities in Brazil.

The company's products include industrial tanks for storing chemicals and fuels in addition to tanks for cisterns to store rainwater and potable water.

"Water tank manufacturing is a batch process in terms of heat consumption. So, a thermal energy storage technology which can deliver changing amounts of heat is a good match," Fortlev CEO Antonio Torres said in an email.

The 1 MWh bGen unit's crushed rocks can store energy for days. Then, when the company needs it, the heat can be used to produce clean steam, hot water or hot air on demand to mold plastic.

The bGen units also can be used to clean food, dry wood or complete other industrial processes using fossil fuels to generate heat.

By substituting biomass for natural gas, Fortlev expects to lower the fuel costs to heat the air by more than 75 percent and reduce the greenhouse gas (GHG) emissions associated with heating the air by about 800 metric tons per year.

Fortlev and Brenmiller Energy officials are in discussions to install 60 bGen units at the Anápolis facility, which they say will eliminate 48,000 metric tons of GHG emissions per year. That's equivalent to the GHG emissions released by 10,500 gasoline-powered passenger vehicles driven for one year.

The bGen units will be built at Fortlev Solar, a distributor of photovoltaic products based in Espírito Santo, Brazil.

Fortlev Solar is another company founded by Torres, but it doesn't share any management and serves different markets.

Fortlev Solar will open a manufacturing factory to produce bGen units for the Brazilian market. Torres said the plan is to complete 60 units in less than a year and have them operational in 2023.

The investment will help Fortlev deliver quality water storage products while respecting the environment, Torres added.

"By helping Fortlev lower our fuel expenses and decarbonize one of our thermal manufacturing processes, Brenmiller Energy's bGen technology is helping us realize this goal and do well while doing good," Torres said.

Fortlev officials will consider expanding the use of the bGen units to its seven other manufacturing facilities in Brazil.

By combining thermal storage, heat exchange and steam generation, Brenmiller officials said the bGen technology provides energy efficiency, output stability and scalability to decarbonize.

The technology also is flexible so processors can use electricity from the grid, solar panels or wind turbines with different thermal sources of energy, such as biomass, flue gas and recovered heat, to charge the bGen units.

"Forward-thinking industrial companies like Fortlev want to decarbonize their thermal processes. But until recently, there have been few, if any, reliable, cost-effective, long-lived solutions that allow them to do so," Avi Brenmiller said. "Our bGen technology enables these companies to start using renewable energy resources and waste heat to efficiently produce clean steam, hot water and hot air on demand, allowing them to decarbonize their thermal process — and in some cases, like Fortlev, reduce their fuel costs while doing so."

The partnership was important to support, according to Daniel Zonshine, ambassador of Israel in Brazil, who pointed to the Israel Innovation Authority and Brazilian research agency.

"It is inspiring to see this binational cooperation, where an innovative Israeli company implemented its groundbreaking technology in a factory of a large Brazilian company," Zonshine said in a news release. "This partnership has great potential in the Brazilian energy storage market and beyond."

In addition to generating hot air to mold plastic, Brenmiller officials are working with Philip Morris International in Romania, Enel in Italy and other industrial and utility customers to use its TES technology to decarbonize a range of processes.

Charter Next Generation buys Ohio films business

By Jim Johnson
Plastics News Staff

One plastic film maker is growing while another one is getting out of the business.

Charter Next Generation Inc. is acquiring Polymer Film & Bag Inc., the extrusion portion of Polymer Packaging of Massillon, Ohio.

"PF&B is a perfect fit for CNG and will help us continue to outpace industry growth in the future," Charter Next Generation CEO Kathy Bolhous said in a statement.

Charter Next Generation said Polymer Film & Bag brings some "unique capabilities" that will allow the company to "expand into new, attractive vertical markets.

"Polymer Film & Bag is a Safe Quality Food (SQF) manufacturing company serving industrial and foodservice markets. Its state-of-the-art coextrusion lines offer superior quality, environmentally responsible films featuring a stronger but thinner design that surpass the properties of thicker conventional films," Charter Next Generation said.

Larry Lanham owns Polymer Packaging and said he had a couple of key constituents in mind while making the deal.

"As I considered divesting this business, my primary concern was to find the best possible home for my employees while providing the best possible care for our customers," Lanham said in a statement. "I immediately thought of CNG, the preeminent supplier in this marketplace, with a reputation for delivering both."

It was less than three years ago that Lanham unveiled plans to enter the extrusion business after more than a decade of absence.

In an October 2019 *Plastics News* story, the company said it was spending more than $10 million on new equipment and had plans to start film production with a pair of three-layer, coextrusion lines made by Windmöller & Hölscher.

That move came after the company had been discussing growth strategies in 2018 when a customer asked if the firm would consider manufacturing film again. Polymer Packaging had previously entered the business in 2007 but ran into headwinds caused by the 2008 economic crisis.

This is the second divestiture for Polymer Packaging in just a matter of days.

Charter Next Generation has acquired Polymer Film & Bag and related assets from Polymer Packaging Inc.
Charter Next Generation Inc. photo

Dazpak Flexible Packaging, owned by private equity firm HIG Capital, acquired the Inno-lok division of Polymer Packaging, the company said in early August. HIG also made a high-profile acquisition on Aug. 12 when Avient Corp. announced that an affiliate of the private equity group would pay $950 million for Avient's distribution business.

That deal was part of an overall strategy that also added Atlapac Corp. of Columbus, Ohio, to allow Dazpak to strengthen its Midwest presence and move beyond its core markets in the West.

Charter Next Generation, based in Milton, Wis., has grown in recent years to become the No. 10 film and sheet production in North America with estimated sales of $1 billion, according to an annual list compiled by *PN*.

2022 ROTATIONAL MOLDERS RANKING

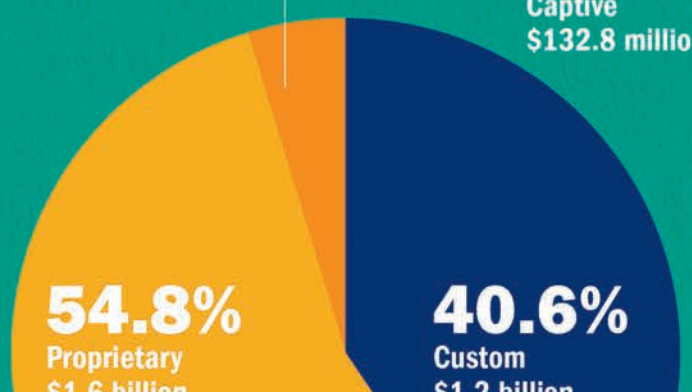
RANKING AND INDEX: PAGES 10-15

TOTAL SALES

106 RESPONDENTS

$2.9 BILLION

SALES BREAKDOWN



AVERAGE SALES PER COMPANY UP **15%**

12,082 EMPLOYEES
93 RESPONDENTS
88% RESPONDING

UP 5%

UP 1.6%

1,003 MACHINES
103 RESPONDENTS
97% RESPONDING

TOP CUSTOM ROTATIONAL MOLDERS

1. Myers Industries Inc. **$209.8 MILLION** 95% OF RANKED SALES
2. Tank Holding Corp. **$192.5 MILLION** 35% OF RANKED SALES
3. Centro Inc. **$170 MILLION** 100% OF RANKED SALES
4. Solar Plastics LLC **$45 MILLION** 100% OF RANKED SALES
5. Moeller Marine Products Inc. **$34.8 MILLION** 58% OF RANKED SALES

TOP PROPRIETARY ROTATIONAL MOLDERS

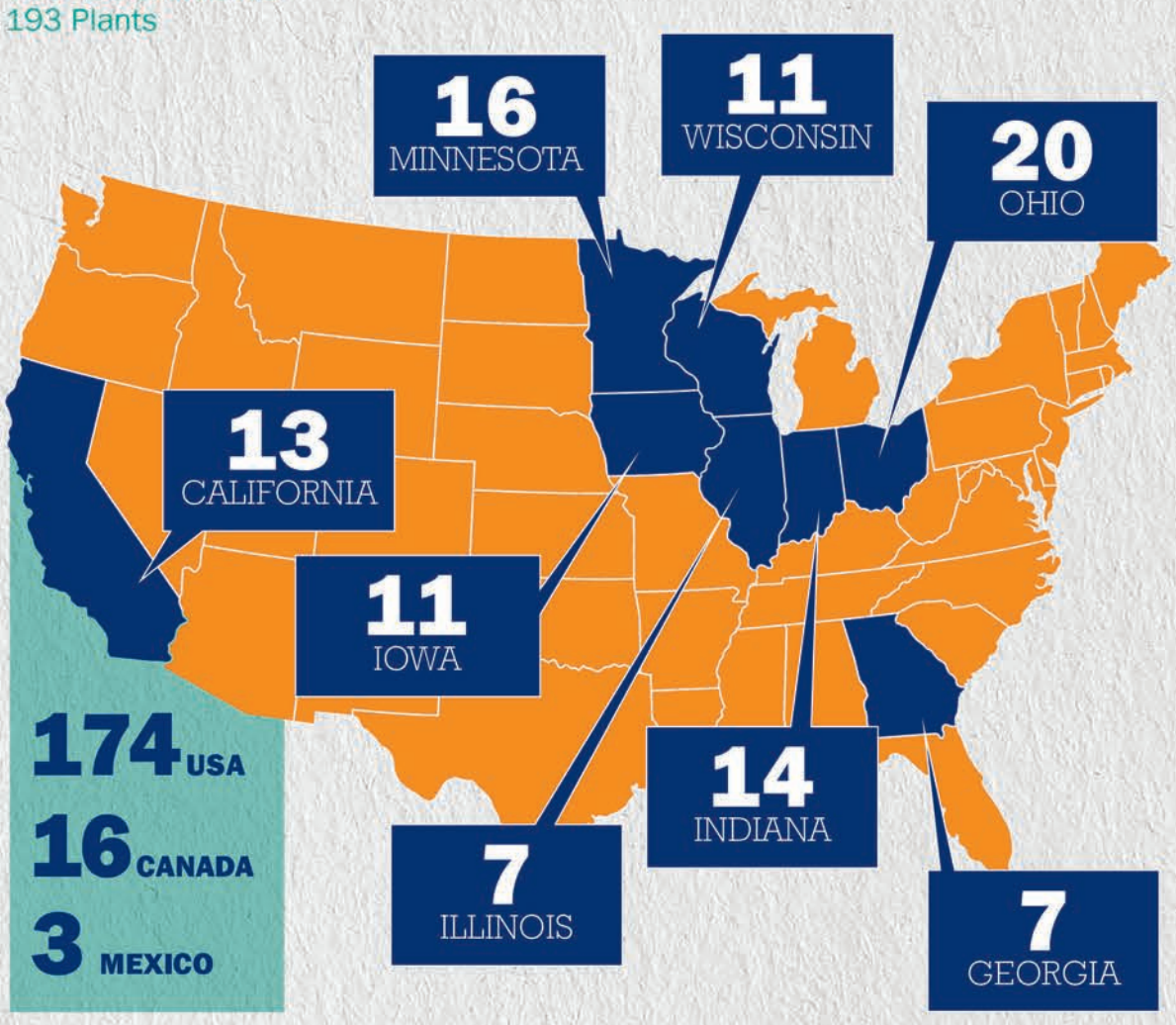
1. Tank Holding Corp. **$357.5 MILLION** 65% OF RANKED SALES
2. Toter LLC **$171 MILLION** 95% OF RANKED SALES
3. Step2 Discovery LLC **$156.8 MILLION** 95% OF RANKED SALES
4. Little Tikes Co. **$139.5 MILLION** 90% OF RANKED SALES
5. Pelican Products Inc. **$118.8 MILLION** 95% OF RANKED SALES

TOP CAPTIVE ROTATIONAL MOLDERS

1. PlayPower Inc. **$38 MILLION** 100% OF RANKED SALES
2. GameTime **$25 MILLION** 100% OF RANKED SALES
3. Premier O.E.M. **$17.1 MILLION** 90% OF RANKED SALES
4. Tennant Commercial **$9 MILLION** 100% OF RANKED SALES
5. Moeller Marine Products Inc. **$8.4 MILLION** 14% OF RANKED SALES

TOP LOCATIONS

193 Plants



PLASTICS NEWS RESEARCH BY HOLLEE KELLER, GRAPHICS BY AMY STEINHAUSER

2022 ROTATIONAL MOLDERS RANKING

Rank	Company/ Parent company	Top rotational molding official	Rotomolding sales (millions) Most recent year	Rotomolding sales (millions) Previous year	Most recent year's total corp. sales (millions)	Rotomolding employees	Plants	Number rotational machines	Annual resin throughput (million lbs.)	Materials	Secondary services	Primary end markets
1	**Tank Holding Corp.** Lincoln, Neb.	Greg Wade CEO	**$550E**	$420E	$580	1,700E	36E	162E	N.A.	1,2,3,4,5,6,7,8,10	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,21
	Tank Holding Corp. includes the January acquisition of Dutchland Plastics LLC.											
2	**Myers Industries Inc.(P)** Akron, Ohio	Jack Welter Business VP rotational molding	**$220.8**	$164.3	$761.4	1,350	10	82	N.A.	1,2,3,4,5,8	1,2,3,4,6,7,8,9,10	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19
3	**Toter LLC** Statesville, N.C. Wastequip LLC	Henry Retamal President of operations, Wastequip	**$180E**	$180E	N.A.	500	3	10+	N.A.	2,3	1,6,7,8,9	2,5,6,12,13,15
4	**Centro Inc.** North Liberty, Iowa	Brian Olesen CEO & President	**$170E** 6/25/2022	$143E	$143	1,100E	9	40E	16E	1,3,5,8	1,2,3,4,7,8,10	2,4,7,8,9,10,12
5	**Step2 Discovery LLC** Streetsboro, Ohio	Douglas McBurney COO	**$165E**	$172.5	N.A.	820E	3	34E	N.A.	2	1,2,3,7,8,9,10	1,2,5,6,7,8,11,12,13,17
6	**Little Tikes Co.** Hudson, Ohio MGA Entertainment Inc.	Tom Fish Sr. director new business development, LT Molding Solutions	**$155E**	$148E	N.A.	550E	1	16E	N.A.	1,2	1,2,3,4,6,7,8,10	1,5,7,8,12,20
7	**Pelican Products Inc.** Torrance, Calif.	Phil Gyori CEO & President	**$125E**	$115E	N.A.	N.A.	1	13E	N.A.	2,3,8	1,2,3,4,5,6,7,8,9,10	2,3,4,5,10,11,12,16,17,18
8	**Moeller Marine Products Inc.** Sparta, Tenn. Dometic Group AB(P)	Oliver Bahr President, Americas Dometic Group	**$60E**	$50E	$2,509	300E	1	16E	N.A.	2,5,8	1,2,3,6,7,8,9,10	2,3,4,5,6,7,8,12,13,14,21
9	**Den Hartog Industries Inc.** Hospers, Iowa	John Den Hartog CEO & President	**$55**	$45.7	$73.5	191	1	22	19.9	1,2,3,5,7,8	1,2,3,4,6,7,8,9,10	2,7,8,9,12,14,21
10	**Confluence Outdoor** Greenville, S.C. Pelican International Inc.	Joe Ervin General manager	**$50E**	$48E	N.A.	N.A.	1	9E	N.A.	2,3	1,2,3,5,6,7,8,9	7
11	**Rhino Inc.** Maple Lake, Minn.	Jennifer Johanneck-Eystad President	**$45E**	$40	$45	150E	1	7E	8E	1,2,3,5,7,8	1,2,3,7,8,9	2,5,6,7,8,9,10,11,12,13,14,16,17,18,19
11	**Solar Plastics LLC** Delano, Minn.	Sam Rosen President	**$45E**	$38	N.A.	395E	3	17	8E	1,2,3,4,5,8,10	1,2,3,4,5,6,7,8,9,10	2,4,6,7,8,9,10,12,17,18
13	**Iowa Rotocast Plastics Inc.** Decorah, Iowa	Greg Lewey President	**$39E**	$35.5E	$39	125E	2	N.A.	N.A.	2,3	1,2,5,6,7,8,9,10	1,3,5,6,7,8,13
14	**Laerdal Medical Corp.** Wappingers Falls, N.Y. Laerdal Medical AS	Neil Weber President	**$38E**	$33E	N.A.	N.A.	1	8	0.3E	2	1,5,7,9	2,7,11
14	**PlayPower Inc.** Huntersville, N.C.	Bryan Yeazel CEO	**$38E**	$38E	N.A.	N.A.	2	15E	N.A.	2	1,2,3,4,5,6,7,9,10	7
14	**Poly Processing Co. LLC** Monroe, La. Abell Corp.	Dixon Abell President & owner	**$38E**	$35E	N.A.	N.A.	3	13E	N.A.	3,8	1,8,9	2,4,14
17	**Hedstrom Plastics LLC** Ashland, Ohio	Allen Berg General manager	**$35**	$28	N.A.	145	2	23	8	1,2,3,4,5,7,8	1,2,3,4,5,6,7,8,9,10	1,4,5,6,7,8,11,13,15,16,17,18,20,21
18	**RTS Cos. Inc.** St. Clements, Ont. Roto Holdings Inc.	Graham Lobban CEO & President	**$34E**	$30	N.A.	90E	2	15E	4.5E	2	1,2,4,5,6,7,8,10	2,3,5,6,7,8,12,13,14,19
19	**Agri-Plastics Custom Rotomolding** Sidney, Neb. Agri-Plastics USA LLC	Darren VanBuuren CEO & President	**$27** 8/31/2021	$33	$27	145	2	18	9.5	1,2,3,4	1,2,3,6,7,10	2,6,7,8,12,13,18,19
19	**Plasticraft Corp.** Darien, Wis.	Matthew Bushman President	**$27**	$23	N.A.	190	1	16	13	2,3,4,5,8,10	1,2,3,4,6,7,8,10	1,2,3,5,6,7,8,9,10,12,13,19,20,21
21	**Forté Products** Kansas City, Mo.	Bradley Robertson President	**$25E**	$25	$50	120E	2	10E	8.4E	1,2,3,8,10	1,2,3,4,6,7,8,9,10	1,2,3,4,5,6,7,8,9,11,12,13,16,17,18,19
21	**GameTime** Fort Payne, Ala. PlayCore Holdings Inc.	Spencer Cheak Group president	**$25E**	$25E	N.A.	50E	1	6E	N.A.	1,3	3	7

See key on page 14

Chart continues on page 11

Researcher: HOLLEE KELLER

RANKING ROTATIONAL MOLDERS 2022

Rank	Company/ Parent company	Top rotational molding official	Rotomolding sales (millions) Most recent year	Rotomolding sales (millions) Previous year	Most recent year's total corp. sales (millions)	Rotomolding employees	Plants	Number rotational machines	Annual resin throughput (million lbs.)	Materials	Secondary services	Primary end markets
21	**Johnson Outdoors Inc.**(P) Racine, Wis.	Helen Johnson-Leipold Chairman & CEO	**$25**E 10/1/2021	$16E	$751.7	250E	1	40E	N.A.	1,2,3	7	7
24	**Seljan Co. Inc.** Lake Mills, Wis.	Ken Bather Vice president	**$24** 8/31/2021	$22	N.A.	135E	1	9E	5E	2,3,4,7,8	1,2,4,5,6,7,8,9, 10	3,5,6,7,8,9,11, 12,13,17
25	**Remcon Plastics Inc.** Reading, Pa.	Peter Connors President	**$21**E	$20.5	N.A.	83E	1	8E	6.5E	2,3,4,5,8,9	1,3,6,7,8,10	2,3,5,12,13,18, 19
26	**Cellofoam North America Inc.** Conyers, Ga.	Tom LaGrassa President	**$20**E	$20E	N.A.	80E	3	9E	8E	2	1,2,7,8,10	2,7,13,14,15,16, 17,21
26	**Horizon Manufacturing Group LLC** Lake Mills, Wis.	Ed Krausse CEO & President	**$20**	$13.5	$20	140	2	13	5	2,3,4,5,7,8	1,2,3,4,5,6,7,8, 9,10	1,2,3,5,6,7,8,9, 12,13,17,18,21
28	**Accuform Polymers Inc.** Warsaw, N.C.	Patrick Renfro Owner	**$19**	$19	N.A.	100	2	7	2.5	1,2	1,2,3,4,5,6,7,8, 9,10	2,5,6,7,8,9,10, 11,12,18
28	**Premier O.E.M.** Cuyahoga Falls, Ohio Polaris Inc.	James Nagy President	**$19**E	$17	$8,198	80E	1	5E	3.2E	2,3,8,10	1,2,3,4,6,7,8,9, 10	6,7,18,21
28	**Rotational Molding Technologies Inc.** New Paris, Ind.	Michael Bruce President	**$19**E	$19E	$19	130E	1	9E	8E	1,2,3,4,8, 10	1,3,7,8,9,10	2,3,5,6,7,8,9,12, 14,16,17,18,19,21
28	**Simtek Fence** Orem, Utah Cie. de Saint-Gobain(P)	Chris Vincent Production executive	**$19**E	$17E	$52,109	75E	1	5E	7E	2,3	1,2,3,8,9	6,8
32	**Diversified Plastics Inc.** Latta, S.C.	Tommy Wallace CEO & President	**$18.9**	$13.3	$18.9	80	2	14	5	2,3	1,2,3,7	2,3,5,7,9,12,13, 15,19,21
33	**Simplay3 Co.** Streetsboro, Ohio	Jim Miller President	**$18**E	$15	$18	100	1	6	N.A.	2	1,2,3,7,8,9,10	1,8
34	**Revolv Manufacturing Inc.** Brainerd, Minn. Stern Cos. Inc.	Ardell Paulson President	**$17.1**	$16.5	N.A.	125	3	11	N.A.	1,2,3,5,8	2,3,6,7,10	1,2,5,6,7,8,9,12, 14,18,19,21
			Revolv Manufacturing Inc. was previously listed as Stern Assembly Inc. dba Stern Rotomolding.									
35	**Custom Roto-Mold LLC** Benson, Minn.	Corey Claussen President	**$17**E	$16.9	$17	110E	2	9E	N.A.	1,2,3,5,7,8	1,2,3,4,5,6,7,8, 9,10	1,2,3,4,5,6,7,8,9, 12
35	**Horsemen's Pride Inc.** Streetsboro, Ohio	Robert Miavitz President	**$17**	$16E	$19.8	87	1	4	2.8	2	1,7	7,8
37	**Fibertech Plastics LLC** Elberfeld, Ind.	Brent Rasche President	**$16**E	$15	$16	130E	1	4E	3E	1,2,3,4	1,2,6,7,8,9,10	1,2,3,4,5,6,7,8,9, 12,14,15,17,19, 21
38	**Sonoco Thermosafe** Beecher, Ill. Sonoco Products Co.(P)	Andrew Sinnen Sales director	**$15**E	$15E	$143	55E	1	3E	2E	3	1,2,3,5,6,7,8,9, 10	5,12,20
38	**Sæplast Americas Inc.** St. John, N.B. Rotovia	Brian Gooding Managing director	**$15**	$14	$5,590	N.A.	1	2	N.A.	2	N.A.	3,5
			Icelandic private equity funds Freyja and SÍA IV and key management acquired Berry Global Group Inc.'s rotational molding business, Sæplast Americas Inc. The new brand will operate as Rotovia.									

See key on page 14

Chart continues on page 12

2022 ROTATIONAL MOLDERS RANKING

Rank	Company/ Parent company	Top rotational molding official	Rotomolding sales (millions) Most recent year	Rotomolding sales (millions) Previous year	Most recent year's total corp. sales (millions)	Rotomolding employees	Plants	Number rotational machines	Annual resin throughput (million lbs.)	Materials	Secondary services	Primary end markets
40	**Redline Plastics LLC** Manitowoc, Wis.	Chuck Webster CEO & owner	**$14.5**	$7.4	$25	175	1	6	5.2	1,2,3,4,5,6,7,8	1,2,3,4,7,8,9,10	2,3,5,6,7,8,9,10,12,13,14,18,20,21
41	**Aggressive Industries Inc.** Minneapolis	Tomm Berquist President	**$14E** 8/31/2021	$14E	$14	80	2	11	5	2,3,5,7,8	1,2,3,4,5,7,8	8
42	**EnviCor Enterprises LLC** Smithfield, N.C.	Steve Arnold CEO & President	**$13.4**	$8.5E	$13.4	80	1	6	4	2,3	1,6,7,8,9,10	1,2,3,4,5,7,8,9,12,13,14,19,20
43	**Rotoplast Inc.** East Farnham, Quebec	Sébastien Daudelin President	**$13E** 3/31/2022	$12	$13	80E	2	6E	1.5E	1,2,3,4,5,7,8,10	2,4,6,7,8,10	2,3,5,6,7,9,10,11,14
44	**Dakota Molding Inc.** Fargo, N.D.	Brad Keller President	**$12.5E**	$12E	$12.5	60E	1	5E	N.A.	2,3,5,8	1,2,3,4,7,8,9,10	2,12
44	**Hastings Equity Manufacturing Co.** Hastings, Neb. Dutton-Lainson Co.	Brian Consbruck Production mgr.	**$12.5E**	$12.5E	$18	50E	1	1E	1.1E	1,2,3	1,7,9,10	2,3,8,9,12
46	**Jer-Den Plastics Inc.** St. Louis, Mich.	Jeff Stahl President	**$12**	$8.7	$12	75	1	5	0	2,3,8	1,2,4,5,6,7,8,9,10	1,2,3,5,6,7,8,9,12
46	**ShoreMaster LLC** Fergus Falls, Minn.	Don Hurley CEO	**$12E**	$10E	N.A.	N.A.	1	7	N.A.	2,3,7	1,2,7,8,9,10	2,7,21
46	**Sterling Technologies Inc.** Lake City, Pa.	Cary Quigley President	**$12E** 9/30/2022	$11	$12	115E	1	7E	3.5E	1,2,3,4,5,7,8,10	1,2,5,7,8	2,5,6,7,8,9,10,12,13,15,18,19
49	**Inca Plastics Molding Co. Inc.** Adelanto, Calif.	Howard Haigh President	**$11.3**	$7.9	$11.3	48	1	4	3.9	2	1,2,7,8,9,10	2,3,7,13
50	**GVL Polymers Inc.** Litchfield, Minn.	Allan Cronen CEO	**$10.1**	$7.4	$10.1	52	1	8	2	1,2,3,8	1,2,3,7,8,9,10	2,3,5,6,7,8,9,21
51	**Atlas Molding LLC** Leola, Pa.	Jeremy Henry CEO	**$10**	$8.5	$10	65	1	4	2.8	3	7	1,2,6,7,8
51	**Quality Holdings LLC** Hartwell, Ga.	Jeff Thomas CEO & President	**$10E**	$10E	N.A.	100E	1	7	N.A.	2,3,5	7,8,9	3,5,6,10,12
51	**Smak Plastics Inc.** Vancouver, Wash.	Jon Smalley President	**$10E**	$10	$10	50E	1	4E	2.5E	1,2,3,5,7,8	1,2,3,6,7,8,9,10	2,3,5,6,7,8,9,10,12,13,14,16,17,18,19,20
54	**PW Aire Technologies PWA Solutions** Olivet, S.D.	Darius Hofer CEO	**$9.8**	$9.8	$9.8	21	2	6	N.A.	1,2	1,2,3,7,8	2,13,19,20
55	**Rotomold USA** Claremore, Okla. HydroHoist LLC	Don Hurley CEO	**$9.5E**	$8E	N.A.	24E	1	3E	4.2E	2,3,8	1,2,4,5,6,7,8,9,10	2,3,4,5,6,7,9,10,12,16,17,18,19
56	**Interpak Inc.** Mentor, Ohio	Mark Shaw President	**$9E**	$9E	$9	N.A.	1	3E	N.A.	2	1,2,10	5,12
56	**Tennant Commercial** Holland, Mich. Tennant Co.(P)	Dave Huml CEO & President	**$9E**	$8.5E	$1,090.8	N.A.	1	6	5E	2,3	7,9	21
58	**Formed Plastics Inc.** Carle Place, N.Y.	Patrick Long President	**$8.7**	$8.7	$12	45	1	5	1.1	1,2,3,4,5,6,8,9	1,2,3,4,5,6,7,8,9,10	1,3,7,8,9,10,11,12,13,14,15,16,18,19
59	**Ronco Plastics Inc.** Tustin, Calif.	Raul Barajas President & owner	**$8.6**	$6.3	$8.6	27	1	5	N.A.	1,2,3,4,8	7,10	2,3,7,8,13,14,16
BIGGEST % GAIN 60	**CPI Products** Port Washington, Wis.	Eric Brill CEO	**$8.5**	$3E	N.A.	60	1	5	N.A.	1,2,3	7,10	12
60	**Gator Cases Inc.** Tampa, Fla.	Crystal Morris President	**$8.5E**	$7.5E	N.A.	29E	1	3E	N.A.	2,3	1,7,8,9,10	6
62	**AK Industries Inc.** Plymouth, Ind.	Rosalind Havens-Marshall Plant manager	**$7.5E**	$7.5E	N.A.	115E	1	5E	3.5E	2,3,8	1,2,7	1,2
62	**Gregstrom Corp.** Woburn, Mass.	Jeff DiDonato President	**$7.5E** 12/1/2021	$7.5E	$10	50E	1	4E	N.A.	1,2,3,4,5,8	1,2,6,7,8,10	2,3,7,8,11,14,15
64	**Custom Roto-Molding Inc.** Caldwell, Idaho	Ed Willson President	**$7E**	$7E	$7	41E	1	6E	2.8E	3,8	1,2,3,7,8,9,10	2,6,7,8,9
64	**Granger Plastics Co.** Middletown, Ohio	Jim Cravens President	**$7E**	$6.5E	$7	30E	1	3E	2E	1,2,3,4,6,8	1,2,4,7,8,9,10	1,2,3,5,6,7,8,12,16,18
64	**R&R Technologies LLC** Edinburgh, Ind.	Dave Hemmerling General manager	**$7E**	$7E	$7	50E	1	7E	7E	1,2,3,4,5,7,8,10	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11,12,13,14,17,18,19
67	**Entegris Inc.(P)** Billerica, Mass.	Bertrand Loy CEO & President	**$6.5E**	$5.5E	$2,299	N.A.	1	1	N.A.	2,3,8,9	1,2,4,7,8,9	2,4
68	**Integrity Rotational Molding LLC** Plainfield, Ind.	Terry Stemple VP & managing partner	**$6E**	$5.6	$6	48E	1	4E	4E	2,3,8,10	1,2,4,5,6,7,8,9,10	2,3,4,5,7,8,9,13,14,17

See key on page 14

Chart continues on page 13

RANKING ROTATIONAL MOLDERS 2022

Rank	Company/ Parent company	Top rotational molding official	Rotomolding sales (millions) Most recent year	Rotomolding sales (millions) Previous year	Most recent year's total corp. sales (millions)	Rotomolding employees	Plants	Number rotational machines	Annual resin throughput (million lbs.)	Materials	Secondary services	Primary end markets
68	**Plasticom Inc.** Winnipeg, Manitoba	Craig Lobson CEO & President	**$6[E]**	$6[E]	N.A.	N.A.	2	6[E]	N.A.	2,3	1,2,3,7,8,9,10	2,5,6,7,10,11,12, 15,17
68	**SPI Plastics Inc.** Shallow Lake, Ontario	Danielle Gamache-Free General manager	**$6[E]**	$6[E]	N.A.	40[E]	1	6[E]	N.A.	2	1,2,3,7,8	1,7,8,9
68	**Vista Plastic Solutions Inc.** Winkler, Manitoba	Ron Funk CEO	**$6[E]**	$6[E]	$12	65[E]	1	5[E]	2[E]	N.A.	N.A.	N.A.
72	**Miraplastek SA de CV** Jesús María, Aguascalientes	Conchita Miranda CEO	**$5.5[E]**	$5.1	$5.5	86[E]	1	6[E]	1.8[E]	1,2,3,4,8	1,2,3,5,6,7,8,9, 10	1,2,3,5,8,9,10,12, 13,14,15,17,19
73	**Akro-Plastics** Kent, Ohio U.S. Development Corp.	Dave Meier General manager	**$5[E]**	$5[E]	N.A.	N.A.	1	3[E]	N.A.	1,2,3,8,10	1,2,7,8,9,10	2,3,6,7,8,12,13
73	**Eger Products Inc.** Amelia, Ohio	Dick Koebbe President	**$5[E]**	$5[E]	$10	40[E]	3	4[E]	1[E]	1,2,3,4,8	1,2,6,7,8,10	2,3,5,6,7,8,9,10, 11,12,13,18
73	**Koenders Mfg. 1997 Ltd.** Englefeld, Saskatchewan	Colin Tamme General manager	**$5[E]** 9/30/2021	$5[E]	N.A.	35	1	4	N.A.	1	1,5,7,8,10	2,7,9,12,13
73	**Roto Solutions Inc.** Ashland, Ohio	Ralph Kirkpatrick Co-owner	**$5[E]**	$5[E]	$5	30	1	6	N.A.	1,2,3,5,7,8	1,7,8,10	1,2,4,5,6,8,13,14, 17
73	**Unifuse LLC** Clintwood, Va.	Scott Maier CEO & owner	**$5[E]**	$5[E]	$5	10[E]	1	15[E]	0.5[E]	2	1,2,7,8,9,10	2,3,4,5,8,9,12,13, 14,15,16,17,18,19
78	**Michael Brothers Inc.** Prescott, Ariz.	Bill Michael President	**$4.5[E]**	$4.5[E]	$4.5	55	1	3	1	2,3,4,8,10	1,2,7,8,9,10	2,4,6,9,12,13,17, 19
78	**Rotomolding Inc.** Little Falls, Minn.	Bob Usher CEO & President	**$4.5[E]**	$4.3[E]	$4.5	33[E]	1	5[E]	1.3[E]	1,2,3,5,8	2,3,7,8,9,10	1,2,3,5,6,7,8,9, 13,17,18,20
80	**Kärcher North America Inc.** Aurora, Colo. Alfred Kärcher GmbH & Co. KG	Kevin Lytle Sr. production lead	**$4[E]**	$4[E]	$3,648.6	12[E]	1	2[E]	0.8[E]	2,3	1,2,3,5,7,8	2
80	**Ken Ross Inc.** Wylie, Texas	Daniel Ross President	**$4**	$3	$4	30	1	5	2	1,2,3	1,2,3,6,7,8,9, 10	7,8,21
80	**Rochester Rotational Molding Inc.** Rochester, Ind.	Cara Shambarger Owner	**$4[E]**	$4	$4	15	1	2	1.6	1,2,3	3,6,7,8,9,10	2,3,5,6,7,8,9,12, 14,18,19
80	**Smart Tech Products** Klamath Falls, Ore.	Don VonderBurg CEO	**$4[E]**	$4[E]	N.A.	12[E]	1	4[E]	0.7[E]	1,2,3,4,5,6, 7,8,10	1,2,3,5,6,7,8,9, 10	1,2,3,6,7,8,9,12, 21
80	**Zeebest Plastics of Canada Inc.** Morinville, Alberta	Derek Nielsen Owner	**$4[E]**	$4[E]	N.A.	20[E]	1	8[E]	0.5[E]	2,3	1,7,8,9,10	2,12
85	**C-Pak Industries Inc.** San Bernardino, Calif.	Candice Etchepare General manager	**$3.6**	$2.8	$3.6	25	1	3	0.5	1,2,3,4,5,8	1,2,7,8,9,10	2,3,6,7,10,12,16, 17,18
86	**Franklin Fueling Systems LLC** Madison, Wis. Franklin Electric Co. Inc.[(P)]	Jay Walsh President, fueling systems	**$3.5[E]**	$3[E]	$1,662	N.A.	1	2	N.A.	3	7	12
87	**Endurequest Corp.** Porterville, Calif.	Kenneth Dewing Director	**$3[E]**	$2.5[E]	$3	18[E]	1	4[E]	1[E]	2,3,8	1,2,6,7,8,9	2,3,5,6,7,12,14
87	**Faribo Manufacturing Co.** Faribault, Minn.	Tim Hoschette President	**$3[E]**	$3[E]	3.0	30[E]	1	5[E]	0.6[E]	2,3,6,8	6,7,9,10	2,3,5,6,11,13,18
87	**Kracor Inc.** Milwaukee Yamaha Motor Co. Ltd.[(P)]	Ben Speciale President, Yamaha Marine Group	**$3[E]**	$3[E]	$16,313	20[E]	1	5[E]	2[E]	2,3,4,5,7,8	1,2,3,4,5,6,7,8, 9,10	2,3,6,7,8,9,12,13, 14,16,17,18,19
90	**Scribner Plastics Inc.** Rancho Cordova, Calif.	Rick Scribner President	**$2.60**	$2.60	2.6	20	1	N.A.	N.A.	2,3,8	1,2,7,9,10	2,5,6,9,10,11,12, 14,17,19
91	**E-Z Rotational Molder Inc.** Elk Grove Village, Ill.	Pete Zalewski President	**$2.5[E]**	$2.5[E]	2.5	7	1	2	N.A.	1,2,3,4,7,8	1,2,5,6,7,8,10	1,2,3,6,7,8,9,11, 12,13,17,18
91	**Gemstar Manufacturing** Cannon Falls, Minn. Gemini Inc.	Anna Lee Cleary Product manager	**$2.5[E]** 9/30/2021	$2.5[E]	N.A.	10[E]	1	2[E]	0.1[E]	1,2,3,5,8	1,2,4,6,7,8,9, 10	2,3,5,6,7,8,9,10, 11,12,16

See key on page 14

Chart continues on page 14

2022 ROTATIONAL MOLDERS RANKING

Rank	Company/ Parent company	Top rotational molding official	Rotomolding sales (millions) Most recent year	Rotomolding sales (millions) Previous year	Most recent year's total corp. sales (millions)	Rotomolding employees	Plants	Number rotational machines	Annual resin throughput (million lbs.)	Materials	Secondary services	Primary end markets
91	**Rescraft Plastic Products Inc.** Paris, Ontario	Doug Cunningham President	**$2.5** 9/30/2021	$2.5	$3	18	1	3	2	1,3,4,6,7,8, 10	1,2,5,6,7,8,9, 10	2,5,7,8
91	**Roto Plastics Corp.** Adrian, Mich.	Joe Cabello President	**$2.5**[E]	$2.5[E]	$4.5	22[E]	1	6[E]	0.4[E]	2,3,7,8	1,2,5,7,8,9,10	2,6,7,9,18
91	**Trionic Corp.** Port Washington, Wis.	Santo Cannistra President	**$2.5**[E]	$2.2[E]	$2.5	12	1	1	N.A.	1,2,3,8	1,2,3,6,7,8,9, 10	1,2,3,5,6,7,8,9, 12,14,18,21
91	**Wes Industries Inc.** Princeville, Quebec	Pierre Forgues Product manager	**$2.5**[E] 4/30/2022	$2[E]	$4.5	15[E]	1	2[E]	0.4[E]	1	1,10	2,7,17
97	**Allied Resin Technologies LLC** Leominster, Mass.	Daniele La Posta CEO	**$2**[E]	$2[E]	N.A.	23[E]	1	1[E]	N.A.	3	3,5,6,7,10	6,7,8,12,17
97	**Fusibond Piping Systems Inc.** Downers Grove, Ill.	Craig Krause Operations mgr.	**$2**[E]	$2	N.A.	14[E]	1	5[E]	0.1[E]	3,4,9	1,7,8,9,10	12,14,15
97	**Three60 Roto** Howell, Mich.	Jeff Oelslager CEO	**$2**[E]	$2[E]	$2	20[E]	1	2[E]	0.8[E]	2,3,5,8	1,2,3,7,8,9,10	2,3,5,6,7,8,9,10, 11,12,13,17,20
97	**Watkins Manufacturing Corp.** Vista, Calif. Masco. Corp.[(P)]	Vijaikrishna Teenarsipur President	**$2**[E]	$1.5[E]	$8,375	7[E]	1	2[E]	2[E]	1,3,8	6,7	6
101	**California Rotational Plastics Inc.** Oxnard, Calif.	Rene Ribbers President	**$1.6** 9/30/2021	$1.5	$1.6	15	1	4	0.8	2,3,4,7,8	1,3,7,10	2,6,7,8,11,16,17, 19,21
102	**Century Plastics Ltd.** Richmond, B.C.	Dale Moscovitch President	**$1.5**[E]	$1.5	$1.5	10	1	3	N.A.	1,2	1,7	2,14
103	**Quadel Industries Inc.** Coos Bay, Ore.	Eric Luckman President	**$1.3**[E] 10/31/2021	$1.3[E]	N.A.	30[E]	1	3[E]	0.7[E]	2,3,8	1,6,7	1,2,7,8,18
104	**Comdess Co. Inc.** Seville, Ohio	Samuel Mandich President	**$1**[E] 10/31/2021	$1[E]	$1	14[E]	1	3[E]	N.A.	1,2,3,6,7,8, 9	7,10	1,2,7,8,9,10,12, 13,14,18
104	**Coon Manufacturing Inc.** Spickard, Mo.	Anita Cox Owner	**$1**[E] 6/30/2022	$1[E]	$2.3	15[E]	1	4[E]	1[E]	2,3	1,3,8,9	6,7,13
106	**Anduran Inc.** Union, S.C.	Richard Durrant President	**$0.2**[E] 5/31/2021	$0.2[E]	N.A.	3[E]	1	N.A.	0.1[E]	2,3	1,7,8,9,10	2,6,13

RANKING KEY & NOTES

(P)=Publicly held N.A.=Not available

All information was provided by the companies, except where otherwise indicated.

*Midpoint of a company-provided range

**Company-provided estimate

[E]*Plastics News* and industry estimates. These figures were not provided by the company.

CURRENCY NOTE: All sales figures reported in foreign currencies have been converted to U.S. dollars using the average annual exchange rate for the 12 months of each company's fiscal year. For Canadian firms with fiscal years corresponding to calendar year 2021, the following average annual rate was used: C$1=US$0.8.

All companies' fiscal years correspond to calendar year 2021 unless otherwise noted.

Materials:
1 LDPE
2 LLDPE
3 HDPE
4 PP
5 Nylon
6 PC
7 PVC
8 Cross-linked PE
9 Fluoropolymers
10 Post-consumer resin

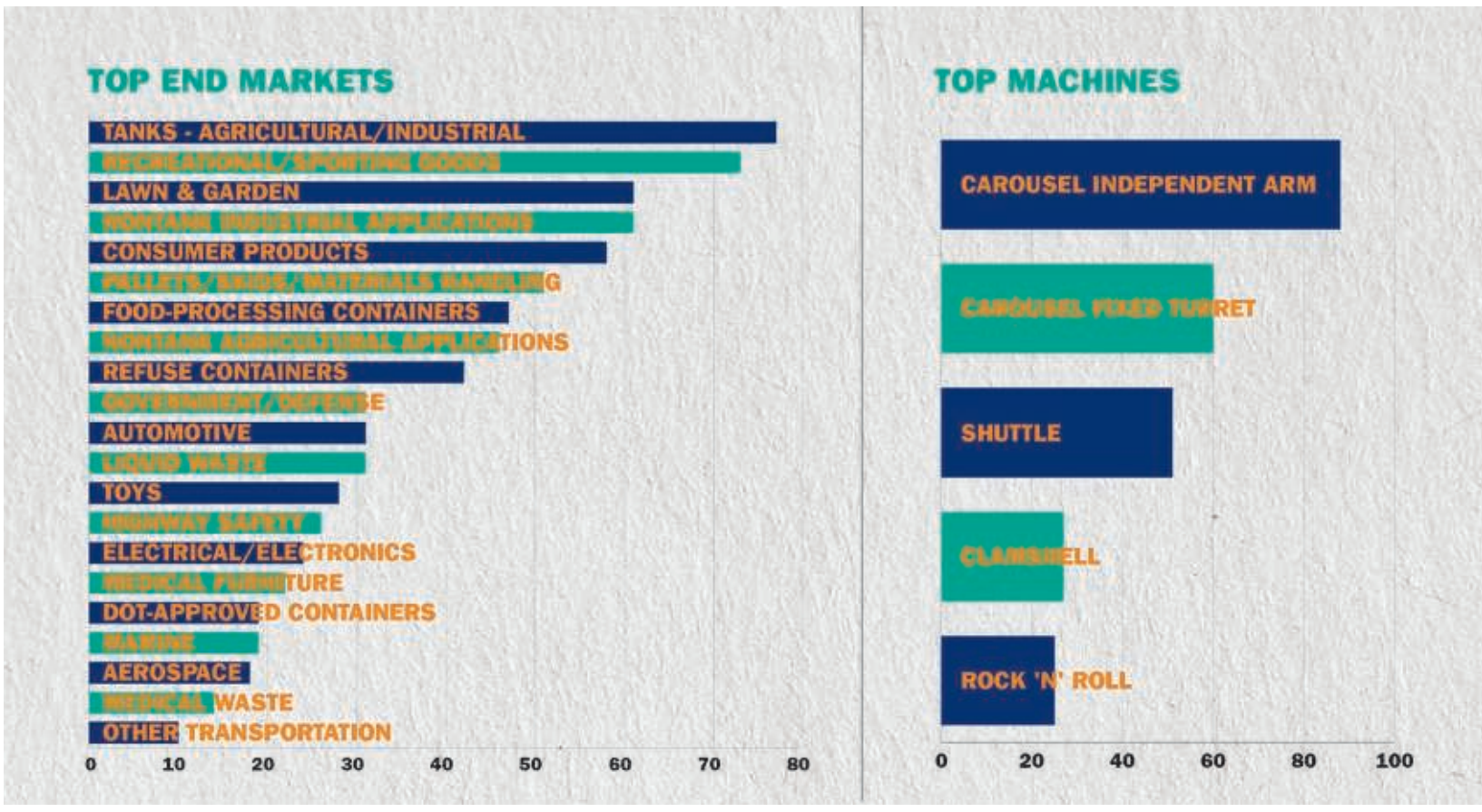
Secondary services:
1 Part Design
2 CAD/CAM/CAE
3 Prototyping/3D printing
4 SPC/SQC
5 Painting
6 Decorating
7 Assembly
8 Tool design
9 Tool building/repair
10 Finishing

Primary end markets:
1 Toys
2 Tanks – agricultural/ industrial
3 Food-processing containers
4 DOT-approved containers
5 Pallets/skids/materials handling
6 Consumer products
7 Recreational/sporting goods
8 Lawn & garden
9 Nontank agricultural applications
10 Electrical/electronics
11 Medical furniture
12 Nontank industrial applications
13 Refuse containers
14 Liquid waste
15 Medical waste
16 Aerospace
17 Automotive
18 Government/defense
19 Highway safety
20 Other transportation
21 Marine

INDEX ROTATIONAL MOLDERS 2022

The following is an alphabetical index of all rotational molders in the ranking

The following is an alphabetical index of all rotational molders in the *Plastics News* ranking. Page numbers are given for the firms ranked in this issue; NR represents firms for which no ranking data was available. View the complete list online at www.plasticsnews.com/rotomolders.



North Carolina rotomolder adding Missouri plant

By Jeannie Reall
Plastics News Correspondent

A growing rotational molder in North Carolina has invested $1.4 million to add a manufacturing site in Sikeston, Mo.

The new EnviCor Enterprises LLC operation, which began production earlier this month with one rotomolding machine, is the company's second plant. EnviCor is hiring and training 25 workers to allow for three production shifts, CEO Steve Arnold said in an Aug. 15 email.

The new site in southeast Missouri will be about 800 miles from EnviCor's home in Smithfield, N.C. The leased, 20,000-square-foot Sikeston facility gives the company its first Midwest presence and opportunities to gain new customers and product markets.

Arnold said EnviCor chose the site because it was available quickly and its location is advantageous for distribution. The company's expansion is being fueled by customers' growth and "inbound opportunities."

The company's $13.4 million in 2021 sales — up from $11 million the year before — included $2.4 million worth of proprietary products; the rest were custom. The company moved from No. 58 to No. 42 in this year's *Plastics News* rotomolders ranking.

EnviCor employs 80 at its 90,000-square-foot Smithfield site, which has five machines and processes about 4 million pounds of high and linear low density polyethylene per year.

Arnold founded EnviCor in 2006 in a 20,000-square-foot space with one used machine, two employees and just two customers. Today, the company has "closer to 40" customers, he said.

EnviCor's markets include recreation, toys, agriculture, transportation, furniture, petroleum, industrial, water and others. Its product lineup ranges from food-processing containers, pallets and tanks to refuse containers and rain barrels.

Plastics News

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Emily Tipaldo
Executive Director
U.S. Plastics Pact

Sustainable Growth in Caps and Closures

Reyes Garcia Mota
Procurement Leader
Coca-Cola Southwest Beverages

Supply Chain Challenges and the Developing Market for Beverage Closures

FEATURED SPEAKERS:

Bob Gillies
Product Development Director, Consumer Packaging North America
Berry Global

Consumer-Driven Innovation Driving Caps & Closures

Melissa Niebes
Chief Commercial Officer
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The Circular Economy and Personal Care Packaging

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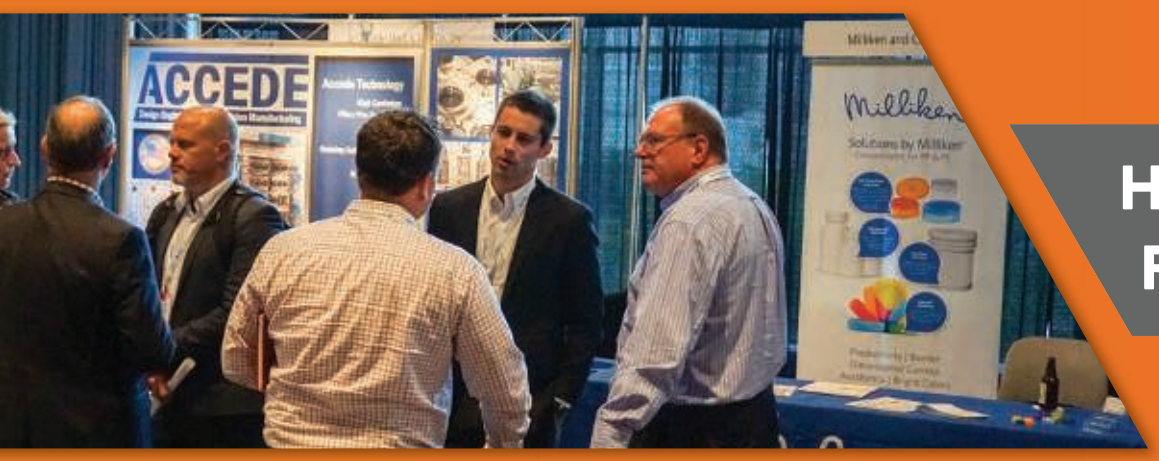

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Wiring clips from ocean plastic, composite wheels honored

Wiring harness clips made of 100 percent ocean plastic used in the Ford Bronco Sport models won an Altair Enlighten Award, while a composite wheel system from Lacks Enterprises takes runner-up position. HellermannTyton Corp.

By Sarah Kominek
Plastics News Staff

Wiring harness clips made of 100 percent ocean plastic used in the Ford Bronco Sport models won an Altair Enlighten Award.

Ford Motor Co. took first place in the sustainable material category for the "industry-first" application of 100 percent ocean plastic in vehicle parts. The material for the parts is "collected by workers from plastic waste in the Indian Ocean and the Arabian Sea," an Aug. 2 news release said.

The wiring harness clips weigh about 5 grams and fasten to the sides of the Bronco Sport second-row seats where they guide wires used to power side-curtain airbags.

The post-consumer material is equally as durable and has a 10 percent cost savings compared with petroleum-based plastic and requires less energy to produce, Ford said in a release.

The clips earned an Innovation Award from the Society of Plastics Engineers last year.

Ford sources the injection molded clips from Milwaukee-based supplier HellermannTyton Corp., which used extruded pellets made from nylon fishing nets.

"HellermannTyton strives for eco-friendly ways to pave the path to a more sustainable future," said Anisia Peterman, HellermannTyton's automotive product manager. "Developments like this do not come easy, so we are proud to collaborate with Ford in support of a unique product solution that contributes to healthier oceans."

They are "the first of many" Ford plans "using discarded plastics fishing nets," it said.

"[This] is a strong example of circular economy," Jim Buczkowski, vice president of research at Ford and Henry Ford technical fellow, said in the release. "While these clips are small, they are an important first step in our explorations to use recycled ocean plastics for additional parts in the future."

Ford Motor Co. photo

Wheel trim system recognized

Lacks Enterprises Inc. was named runner-up for the Altair Enlighten Award's sustainable product category for its wheel trim system for the 2022 Toyota Sienna. The Lacks wheel trim system, designed for the Toyota Sienna, "is the only wheel technology of its kind on the market that reduces unsprung weight — the mass of the suspension, wheels and other components directly connected to them," an Aug. 2 news release said.

"This award speaks to the effectiveness of the technology, which is applicable to gasoline-powered and electric vehicles, where weight reduction, without compromising durability, is critical to improving fuel efficiency," said Kurt Lacks Jr., executive director of business development.

Lacks Enterprises developed the Sienna wheel, produced in Lacks' Grand Rapids, Mich., manufacturing facility, with a "weight-optimized" aluminum wheel backbone and Lacks' composite design surface finish that is permanently bonded to the wheel backbone. This "reduces overall wheel weight, improves fuel efficiency and increases entire drive system longevity," the release said.

The entire wheel system is heat-resistant, withstanding high temperatures produced during hard braking, it said.

Lack's lightweight reduction technology allows different wheel designs and finishes on the same wheel backbone.

"The wheel trim system creates an expanded canvas for evolving wheel design," Kurt Lacks said. "We provide automakers with an expanse of trim-level differentiation that increases vehicle brand and design value at a reduced cost. We like to say that our wheel system technology expands the OEM designer's imagination."

Allowing a variety of finish options on the same wheel backbone, the technology requires only one validated wheel backbone, which saves time and reduces tooling costs.

Lacks Wheel Trim Systems partners with all major OEM aluminum wheel manufacturers and has sold more than 50 million wheels in North America.

MDI

Continued from page 1

Fortune 100 and 500 companies as well as smaller organizations across many industries.

The orders also keep coming from the federal government, which purchased its 100 millionth plastic flat tub from MDI in 2021, according to the company's website.

To meet the demand, MDI has been operating two extrusion lines for PE sheet. The company also had been buying stock PP sheet for the last four years to convert in their operation with plans to eventually become fully vertically integrated.

That day is near. The business just installed a CP 2500 hollow profile sheet mono extrusion line from Milan, Italy-based Agripak srl at its Grand Rapids facility that will be dedicated to PP products.

"This is going to allow us to be even more competitive in the market than buying the sheet elsewhere and converting it here," Majerus said. "I have wanted this polypropylene extruder my entire 14 years here because there is such tremendous opportunity in the market."

She pointed to demand for retail signs and displays, packaging, product partitions and dividers, and hopper bins in addition to custom products to transport, organize or store goods.

"We will sell sheets, but it won't be our prevalent focus," Majerus said. "MDI is unique. We want as much job impact as possible. We're going to go after packaging products that require additional manufacturing processes like RSCs, or reusable slotted containers. That is one of the biggest opportunities in the PP packaging space."

MDI will offer square-fluted PP sheet in eight standard colors as well as custom colors. By extruding it in-house, the company also can expand the product offering to include 5-millimeter-thick sheets in addition to 3- and 4-millimeter sheets. Minnesota Diversified Industries Inc. photos

RSCs are durable, lightweight, reusable and come in different closure styles, such as standard, tuck and tab with optional add ons for Velcro, elastic or foam.

MDI will offer square-fluted PP sheet in eight standard colors as well as custom colors. By extruding it in-house, the company also can expand the product offering to include 5-millimeter-thick sheets in addition to 3- and 4-millimeter sheets.

The extruder cost about $1.7 million, and the downstream equipment and facility electrical upgrades brought the investment to $3.2 million. MDI spent some of its financial reserve to cover the expense along with grants from major supporters, including $675,000 from the Blandin Foundation, $250,000 from the Iron Range Resources and Rehabilitation Board, $75,000 from the Otto Bremer Foundation and $10,000 from Enbridge.

"They all really believe in the mission of MDI," Majerus said. "We have an integrated environment where people can be successful in manufacturing."

About 45 percent of MDI's 400 employees have developmental disabilities, mental illness, physical challenges, orthopedic or neurological disorders, or vision and hearing challenges. However, Majerus said they are not barriers to meaningful work.

"Everyone has abilities. They just need to be matched with the right job and support," she said. "We offer the accommodations, training and coaching to help them be successful. We turn the model upside down. We don't look at disabilities. We look at peoples' abilities and match them with the right opportunity."

The "we" also includes an MDI engineering team that works with customers on designs based on their specific applications and then provides free samples.

"While our new extruder will significantly improve our ability to provide a differentiated customer experience, the positive impacts of this extrusion line go well beyond that," MDI President and CEO Eric Black said in a news release. "Growth from this innovative technology will also allow MDI to create new employment opportunities for people with disabilities."

Product Spotlight

Product Spotlight

Natech Plastics buys three new injection presses

By Sarah Kominek
Plastics News Staff

Natech Plastics Inc. purchased and installed three new injection molding machines, which are now up and running at its Ronkonkoma, N.Y., plant. Natech Plastics Inc. photo

Natech Plastics Inc. purchased and installed three new injection molding machines, which are now up and running at its Ronkonkoma, N.Y., plant.

"We were able to get them delivered and installed quickly," Noor Lone, digital content marketer at Natech, told *Plastics News* in an email.

Natech was able to start production four days after installing the machines, a June 19 news release said.

The company installed a new 470E 112-ton Arburg with an integrated robot, Nissei FNX280 with a YCII-250 servo-driven takeout Yushin robot, and Nissei FNX360 with a YCII-400 servo-driven takeout Yushin robot, the release said.

It also purchased new auxiliary equipment, including two Dri-Air dryers, which dry, mix and blend plastic resins.

Natech would not comment on the cost of the investment.

"The new Arburg and Nissei presses give engineers and operators more opportunities to efficiently run scientific molding," the release said. "Scientific molding is a data-driven approach that develops a reliable and repeatable process with little to no variation. Scientific molding optimizes the tool design and validates the part's end use."

"Because of the machine's new technology, we can develop more stable processes," Domingo Hernandez, plant manager of Natech, said in the release.

The new Arburg press has faster robot-to-machine integration, the release said. It also has a four-second difference in cycle time compared with the machine it replaced.

Natech's automation engineer, Sarah Worsham, programmed the machine to run automatically.

"With a fully automatic process, the robot picks up the parts to put them on the conveyor. A fully automatic process helps produce the most parts per minute," Worsham said.

The new Nissei presses run bigger and smaller molds than the machine they replaced, the release said.

"With multiple machines that can run bigger molds, Natech has a more flexible schedule and clients don't have to wait because a machine isn't available to run their product," the release said.

The three machines replaced by the new purchases will be used at Natech's mold making facility for mold sampling and production. Natech has a total of 19 injection molding presses at three facilities.

Natech Plastics develops and manufactures products for medical device, diagnostics, pharmaceutical and consumer goods industries.

News Corp. buys parent of IHS Markit chemical industry analytics business

By Frank Esposito
Plastics News Staff

News Corp. has completed its $295 million cash deal for the Base Chemicals business — including a well-known plastics pricing and consulting unit — of S&P Global Market Intelligence. The business will operate under the name Chemical Market Analytics by OPIS, a Dow Jones Co.

News Corp. first announced the acquisition of OPIS (Oil Price Information Service) and related assets from S&P Global and IHS Markit in February.

In a news release, officials with News Corp. in New York said that the Base Chemicals business "has a strong track record of growth, with a revenue base that is nearly 100 percent digital and recurring and, similar to OPIS, has high margins with modest [capital expenditure] requirements."

The deal resulted from the United Kingdom Competition and Markets Authority's request that IHS Markit divest Base Chemicals and OPIS as part of the S&P Global and IHS Markit merger, which was completed in February.

"Base Chemicals, together with OPIS, will substantially extend the reach and strength of Dow Jones' news and information capabilities in commodities, where the desire for data, analysis and insight is burgeoning, especially in energy, renewables, chemicals and related fields," News Corp. CEO Robert Thomson said.

"The business and teams we are welcoming to our company today have built one of the most trusted sources of information and analysis across the global chemical value chain," added Dow Jones CEO Almar Latour, who also serves as publisher of *The Wall Street Journal*.

Base Chemicals is known for its pricing data, insights, analysis and forecasting capabilities for the world's most important base chemicals. In the fiscal year ending Nov. 30, Base Chemicals generated about $65 million in revenues.

The unit has more than 1,700 customers across a wide range of industries and employs approximately 185. Plastics experts in the Chemical Market Analytics lineup include Nick Vafiadis, Robin Waters, Brendan Dooley and Joel Morales.

The $44 billion S&P/IHS merger was first announced in late 2020. S&P provides credit ratings, benchmarks and analytics in global capital and commodity markets. IHS generates information, analytics and solutions for major industries and markets. IHS moved into plastics and chemicals research when it acquired Houston-based Chemical Market Associates Inc. in 2011.

PEOPLE WATCH

ASAHI/AMERICA INC. — The corrosion-resistant thermoplastic fluid flow equipment provider in Lawrence, Mass., named Brad Doughty to its technical field service team.

BARENTZ NORTH AMERICA — The distributor of life science ingredients and specialty chemicals in Avon, Ohio, named Hany Said senior vice president of sales.

BOREALIS AG — The resin maker in Vienna named Sandra Mueller general counsel and vice president of legal and compliance.

CARPET AMERICA RECOVERY EFFORT — The nonprofit group formed to divert and reuse post-consumer carpet in Dalton, Ga., named Thomas Coates California carpet stewardship program director.

COSMO FILMS LTD. — The biaxially oriented polypropylene film manufacturer in New Delhi named Kulbhushan Malik global business head.

CURBELL PLASTICS — Peter DelGado, senior director of sales and customer service of the distributor of sheet, rod, tube, adhesives and sealants in Orchard Park, N.Y., was named vice president of the International Association of Plastics Distribution. Curbell's regional director, Jeff Burke, has also joined the trade association's board.

DAVIS-STANDARD LLC — The extrusion systems manufacturer in Pawcatuck, Conn., named Christian Eidt chief information officer.

FORDHAM PLASTICS EQUIPMENT CORP. — The equipment supplier in Cedar Point, N.C., named Marty Key technical sales manager and product manager.

GRAHAM ENGINEERING CO. LLC — The equipment manufacturer in York, Pa., named George Radcliff strategic market manager sheet extrusion.

INSTITUTE OF SCRAP RECYCLING INDUSTRIES INC. — The trade group in Washington, D.C., named Komal Jain senior vice president of advocacy. Jain most recently served as a senior director at the American Chemistry Council.

INTEGRICO COMPOSITES INC. — The manufacturer of composite railway products in Sarepta, La., named Douglas Fox CEO.

KRAUSSMAFFEI TECHNOLOGIES GMBH — The machinery manufacturer in Munich named Klaus Jell executive vice president of its digital and service solutions division.

LS MTRON INJECTION MOLDING MACHINES USA — The machinery maker in Duluth, Ga., named Bradd Harried customer service manager for North America.

M. HOLLAND CO. — The thermoplastic resin distributor in Northbrook, Ill., named Ton Koenders sales director for Europe.

MACRO ENGINEERING & TECHNOLOGY INC. — The extrusion machinery manufacturer in Mississauga, Ontario, named Alfredo Santa area sales manager for Canada and Latin America.

MCELROY MANUFACTURING INC. — The manufacturer of thermoplastic pipe joinings in Tulsa, Okla., named Eric Duerr purchasing manager.

NEXAM CHEMICAL HOLDING AB — The developer and manufacturer of heat-activated cross-linkers in Lomma, Sweden, named Christer Svanberg chief technology officer.

NEXT GENERATION RECYCLINGMASCHINEN GMBH — The recycling machine manufacturer in Feldkirchen, Austria, named Gerhard Ohler CEO, succeeding Wolfgang Steinwender.

NOVOLEX — The packaging and foodservice products maker in Hartsville, S.C., named Lisa Dulski chief human resources officer, succeeding Dave Cowfer, who is retiring.

PEARL TECHNOLOGIES INC. — The manufacturer of punching and handling equipment for plastic film in Savannah, N.Y., named Tom Crawford sales director and Rocco Panetta technical sales manager, pouch.

PLASTEK GROUP — The injection molder in Erie, Pa., named Bob Prischak to technical support for its molding manufacturing divisions and James Jergens general manager of tooling for its Penn Erie and Triangle Tool divisions.

SPARTECH LLC — The manufacturer of packaging, rollstock materials, specialty products, and visual and structural sheet in Maryland Heights, Mo., named John Alfano general manager, thin-gauge sheet.

SUR-SEAL LLC — Bill Brown Sales of Niles, Ill., now represents the custom sealing solutions provider in Cincinnati.

TORAY PLASTICS (AMERICA) INC. — The film extruder in North Kingstown, R.I., named Mark Turano senior sales director for its Lumirror division.

Briefly ...

BELZONA POLYMERICS LTD., a manufacturer of polymer repair composites and industrial protective coatings in Harrogate, England, named Philip Robinson application and training director. ... **CODIPRO SA, ALIPA GROUP,** a lifting and packaging accessories provider in Wiltz, Luxembourg, named Matthias Goodwin business developer. ... **FECKEN-KIRFEL GMBH & CO. KG**, a cutting and splitting machinery maker in Aachen, Germany, named Volker Schiffer single managing director. ... **NORDSON ELECTRONICS SOLUTIONS,** a provider of fluid dispensing and surface treatment solutions for electronics in Carlsbad, Calif., named Parker Abodo key account sales manager for the southwestern United States.

Obituary: Bekum Group founder Gottfried Mehnert

By Catherine Kavanaugh
Plastics News Staff


Mehnert

Mehnert's inventiveness also paved the way for further developments in the extrusion blow molding machine sector. These included PVC blow molding for edible oil and water bottles in the 1960s and the invention of the world's first double-sided shuttle machine, which was presented at the 1963 K show in Düsseldorf.

Gottfried Mehnert, founder of Bekum Group and member of the Plastics Hall of Fame, died Aug. 1 at age 87.

Mehnert, who developed his first blow molding machine at age 21, leaves a lasting mark on the industry. He started Bekum Maschinenfabriken GmbH in Berlin in 1959 and built a global group of companies that has delivered more than 18,000 machines to more than 100 countries in addition to innovations that resulted in more than 40 patents.

Mehnert was born in Wilthen, Germany. Educated as a toolmaker, he served a year as an apprentice at Fiedler Tool and Engineering in Meissen. His father, Rudolph Mehnert, started Meno GmbH, a company that did injection molding, built molds and made injection molding machines.

After World War II, that region became East Germany. In 1952, the government seized Rudolph Mehnert's property, including the company. The following year, the family fled to West Berlin.

In a 2006 *Plastics News* profile when Mehnert was named to the Plastics Hall of Fame, Mehnert spoke of his feelings of liberation and youthful exuberance. "That was a positive feeling at that time, because if you're very, very young, nobody thinks negative," he said.

In 1953, he and his father re-established Meno and bought a mold shop. The move into blow molding came when a customer in West Berlin asked Meno to supply bottles. The customer had been getting bottles from West Germany, but the logistics of getting product to West Berlin, which was surrounded by East Germany, were too complicated.

Meno used its first blow molding machine, designed and built by Gottfried Mehnert, in 1955, to make baby bottles and cosmetic bottles, plus bottles for lighter fluid, oil, lemon juice and eye drops. He left his father's company in 1958 and he and his brother Horst Mehnert founded Bekum in Berlin's Mariendorf area. They worked feverishly for a pivotal coming-out party: a 1959 trade show in Düsseldorf, Germany.

At the trade show, Bekum displayed its first machine, which blow molded bottles from the top of the extruded parison. Another showstopper was neck calibration and finishing. Each bottle came out with a perfect neck, 100 percent completed. That set Bekum apart.

Mehnert's inventiveness also paved the way for further developments in the extrusion blow molding machine sector. These included PVC blow molding for edible oil and water bottles in the 1960s and the invention of the world's first double-sided shuttle machine, which was presented at the1963 K show in Düsseldorf.

In the 1970s, Mehnert developed a six-layer coextrusion process that opened up new markets for oxygen-sensitive products and diffusion-tight fuel tanks. Other inventions followed including tie-bar-free clamping systems at the end of the 1980s.

Mehnert's contributions to the industry were recognized in 2006, when he was inducted into the Plastics Hall of Fame.

In 2016, Mehnert placed the management and shares of Bekum in the hands of his youngest son, Michael, who has overseen product launches, award-winning machine designs, advances in energy-saving extruders and an Industry 4.0-capable control system.

Bekum Group includes Bekum Maschinenfabriken GmbH, Germany; Bekum Maschinenfabrik Traismauer GesmbH, Austria; and Bekum America Corp.

Gottfried Mehnert stood by and supported his son with his decades of experience in an advisory capacity. It was difficult for him to withdraw from active day-to-day business, and he would say that Bekum was one of his children.

He is survived by his wife, Heidemarie Mehnert, and sons Michael, Matthias and Andreas.

PepsiCo cuts bottle design costs, time with 3D printed mold inserts

PepsiCo Inc. patented technology in late 2021 for a blow molding process that uses 3D printed mold inserts instead of metal tooling to create new bottle designs at a faster rate and reduced cost.
Trinity Wheeler photo

Catherine Kavanaugh
Plastics News Staff

PepsiCo Inc. is using additive manufacturing in addition to blow molding to develop beverage bottles faster at a reduced cost.

The Purchase, N.Y.-based company patented technology in late 2020 for a blow molding process that uses 3D printed mold inserts instead of metal tooling to create new bottle designs.

The hybrid technology compresses the time it takes to develop prototype tooling from four weeks to 48 hours and slashes costs from as much as $10,000 to $350 per mold set, according to Max Rodriguez, senior manager of global packaging R&D in the advanced engineering and design unit of PepsiCo's Valhalla, N.Y., research center.

"Time and cost are obviously important," Rodriguez said in a case study. "But more important is to have the ability to have the flexibility to run through a number of different design iterations at a record pace so that we can evaluate performance in all of the downstream activities. That really is what helps us to accelerate."

"Time and cost are obviously important. But more important is to have the ability to have the flexibility to run through a number of different design iterations at a record pace so that we can evaluate performance in all of the downstream activities. That really is what helps us to accelerate."

Max Rodriguez
PepsiCo Inc.

For their research, Rodriguez's team 3D printed the internal parts of the mold, which determine the final bottle's geometry, but continued to use a universal metal outer mold shell, which fits into most commercial blow molding machines.

The researchers produced their test bottles with a modified lab-scale stretch blow molding machine built by Belfast, Northern Ireland-based Blow Moulding Technologies.

PepsiCo took delivery of the reengineered BLOWscan-brand machine earlier this year and its researchers have been producing bottles on a daily basis using its hybrid tooling approach for the past few months.

The results show complementary technologies like molding and 3D printing can open up new capabilities.

Meanwhile, conventional metal tooling for blow molding bottles starts with a CAD file of the package design and then it can take up to four weeks to machine a metal tool plus another two weeks to get a trial unit to do the actual blow molding.

Depending on its complexity, a single metal tool set can cost up $10,000, Rodriguez said.

The time and expense has prompted many research and development teams to turn to 3D printing to shorten the process. However, shortcomings still exist. For example, it takes up to three days to print a single blow molding tool from a material like digital ABS using 3D printer equipment that costs some $250,000.

Also, the resulting tool lacks durability and can only produce about 100 bottles before the mold begins to fail.

To overcome the challenges, PepsiCo researchers turned to 3D printer maker Nexa3D in Ventura, Calif., for a hybrid approach that combines parts of a conventional metal mold with 3D printed inserts.

Founded in 2016, Nexa3D makes a range of 3D printing products from desktop printers to industrial additive manufacturing systems.

PepsiCo researchers used Nexa3D's NXE 400 printer and a material called xPEEK147 by Henkel Loctite to 3D print the internal parts of the mold while keeping a universal metal outer mold shell.

To give the mold cavities the compressive strength needed for blow molding up to 40-bar pressure, the team applied a backing of dental stone to the printed inserts.

These hybrid-made molds then were successfully used with the BMT machine to produce more than 10,000 bottles before failure. The cost was up to a 96 percent reduction compared to traditional metal tooling.

A complete mold set can be made in 12 hours, with eight hours of 3D printing time and four hours of curing, according to the case study.

This approach "also facilitates our capability of validating our virtual tools because we are now able to pair them up with physical results," Rodriguez said, adding it will assist PepsiCo in its material characterization work, performance analysis and physical testing.

"Through the use of these capabilities, we expect our development cycle to improve by 30 percent," Rodriguez said.

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Obituary: Trexel CEO Brian Bechard

By Frank Esposito
Plastics News Staff


Bechard

Brian Bechard, president and CEO of foaming technology firm Trexel Inc., died of a sudden heart attack on Aug. 6.

Bechard, 48, was competing in a rowing race on the Merrimack River when he had a heart attack, officials with Trexel in Wilmington, Mass., said in a news release. "While taken too soon, [Bechard] was engaging his athletic passions and doing what he loved," they added. "His leadership, energy and commitment to the company were extraordinary."

Bechard had served as Trexel's CEO since 2015. Officials said that through his leadership and vision, Trexel was able to advance its MuCell technology into new markets and applications.

When Bechard arrived at Trexel, the firm mainly supplied its technology to the automotive industry. Today, while continuing to serve the automotive industry, Trexel has products and customers in packaging, footwear, blow molding and electronics, as well as initiatives in the EV market, officials said.

Trexel employees described Bechard as open, fair, supportive and a respected role model.

"He was a man of integrity and strength, always having a positive but straightforward outlook," officials said. "These attributes served him and Trexel well as he deepened and expanded our relationships with our key partners globally."

Prior to joining Trexel, Bechard ran businesses in Europe and North America for Synventive, managed an injection molding and extrusion plant for Avery Dennison and served as a combat engineering officer in the U.S. Army. Bechard was a graduate of West Point and received his MBA from Harvard Business School.

Bechard is survived by his wife, Patty, and their two sons Nathan and Evan. Officials said that as Trexel undertakes its search for a CEO, Chairman David Bernstein will serve as interim CEO. The firm's day-to-day management will be handled by vice presidents Levi Kishbaugh and Petr Janik.

Trexel has led the development of MuCell microcellular foaming injection molding technology and has pioneered many plastic processing solutions. The technology provides design flexibility and cost savings by allowing plastic part design with material wall thickness optimized for functionality instead of for the injection molding process.

Obituary: Auxiliary equipment patent holder Charles Thiele

By Catherine Kavanaugh
Plastics News Staff

Plastics pioneer Charles "Chuck" William Thiele Sr., the holder of six patents related to auxiliary equipment, died July 17 at age 80.

Thiele was introduced to the plastics and chemicals industries by relatives in Germany when he was stationed there after joining the U.S. Air Force following high school. The relatives were involved with manufacturing pneumatic conveying and blending equipment.


Thiele

After his enlistment was complete, Thiele stayed in Germany and joined Gebrüder Grün. He later returned to the U.S., joining Whitlock Inc. in 1973 as a national sales manager. Soon after, Thiele and his wife, Nancy, started their own rep company.

Thiele then moved his career from sales to inventing products and technology by starting Kenvey Systems to manufacture pneumatic conveying systems. In 1986, he was awarded his first patent for the filterless vacuum receiver, which later became known as the "Silver Bullet" and opened doors for him around the world.

Thiele eventually joined forces with German-based Motan Holdings, forging a lifelong partnership with its then-CEO, Walter Kramer. He started the U.S. division, Motan Inc., and worked alongside the Motan team to develop new products, open up new markets for the company and mentor future industry leaders.

After retirement, Thiele continued to invent more products to solve problems and minimize wear in material conveying lines. He was awarded his last patent in 2022.

Thiele also launched other companies — Getecha and Vactec — and continued to consult with numerous organizations like Novatec, Conair, Piovan, Matsui and Ampacet. In addition, Thiele was a long-serving board member with Bekum America, and he and his wife were active members of the Plastics Pioneers Association.

Outside of the industry, Thiele enjoyed cooking, fishing and traveling.

A celebration of life service is planned from noon to 4 p.m. Oct. 22 at O'Duffy's, 804 W. Vine St., Kalamazoo, Mich. Memorial donations may be made to the Brian Thiele Memorial Scholarship.

Joint venture to make PLA resin in Illinois

By Frank Esposito
Plastics News Staff

Global firms LG Chem and ADM have formed two joint ventures to make lactic acid and polylactic acid (PLA), a rapidly growing bioplastic.

Manufacturing facilities for the JVs will be in Decatur, Ill., officials with ADM in Chicago and with LG Chem in Seoul said in a news release.

The first JV, GreenWise Lactic, will make up to 330 million pounds of high-purity corn-based lactic acid annually. ADM will be majority owner of GreenWise and will contribute fermentation capacity from its Decatur bioproducts facility.

The second JV, LG Chem Illinois Biochem, will be majority-owned by LG Chem. It would build on the firm's expertise in bioplastics to construct a facility that will use product from GreenWise Lactic to make about 165 million pounds of PLA per year. The projects are expected to create more than 125 jobs.


LG Chem and ADM announced Aug. 16 that they have completed an agreement that will see a joint venture for PLA production in Illinois.
LG Chem photo

"Sustainability is one of the enduring global trends that is powering ADM's strategy and growth," CEO Juan Luciano said. He added the JVs will serve several markets, including pharmaceuticals and personal care, textiles and paper products.

LG Chem CEO Hak Cheol Shin said the JVs are part of "a sustainable growth strategy that can directly contribute in solving environmental issues such as climate change and waste plastics."

LG Chem is the first South Korean company to build a PLA plant with integrated production capacities ranging from raw materials to the final product, he added.

Global demand for bioplastics and biopolymers is projected to grow from $10.7 billion in 2021 to $29.7 billion by 2026, representing annual growth of almost 23 percent.

The JVs hope to make final investment decisions around the Decatur projects next year. Pending final investment decisions and approvals, construction is targeted to begin next year, with production starting in late 2025 or early 2026.

Both JVs are participating in Illinois' Economic Development for a Growing Economy program, which provides incentives to job creators who plan to make investments in the state.

LG Chem is a global supplier of plastics and petrochemicals that posted sales of $37.3 billion in 2021. ADM is a global agricultural products firm with 2021 sales of $85.2 billion.

Poly-America neighbors sue for respiratory damage

By Bridget Janis
Plastics News Staff

A group of 39 neighbors of a Texas plastics recycling and compounding firm Poly-America Inc. are suing the company, claiming that a large August 2020 fire at its plant in Grand Prairie left them with respiratory issues.

In a lawsuit filed July 29 in Dallas County court, the residents said they're seeking $7.8 million, or $200,000 per plaintiff, to cover medical expenses and other costs from what they said were toxic air emissions from the fire.

The company did not respond to a request for comment and, as of Aug. 12, had not responded in court.

The lawsuit, filed by Kinder Law PLLC in Dallas, claims that the damages were caused by "defendant's negligent, careless and reckless disregard of these duties," including not enforcing policies, operating safely, properly training staff and taking reasonable precautions to prevent chemical leaks.

In an interview with Dallas TV station NBCDFW, attorney Jennifer Kinder said, "We know everyone has respiratory issues, long-term respiratory issues."

Kinder did not respond to a *Plastics News* request for comment.

One resident, Stacey Mims, told the TV station that "it was coming through the vents and then when I got to my residence, you could see the filaments and the debris, little flakes, coming down, and you could smell the chemicals."

The lawsuit accused the company of not doing enough to keep the nearby population safe.

The 2020 fire burned for just under 24 hours before it was extinguished.

The City Council of Grand Prairie approved a $200,000 settlement June 21 with Poly-America to cover costs for the fire. A city report said Poly-America was unable to recover those costs from its insurance company but wanted to settle with the city for outstanding expenses incurred in fighting the fire. The city document said the unbudgeted costs for the hazardous material response was $235,000, including the cost of mutual aid from other departments.

Besides Grand Prairie's department, firefighters from Fort Worth, Dallas, DFW International Airport, Irving and other nearby communities assisted.

Poly-America manufactures Husky trash bags and holds patents for different bags, according to its website.

The company has had several other recent fires, including one at its Carolina Poly Inc. subsidiary in South Carolina, also in August 2020, as well as a second small blaze at its Grand Prairie factory in September 2021.

Dallas Plastics buys Emballage MPP

By Jeannie Reall
Plastics News Correspondent

Dallas Plastics Corp. has secured a presence in the Canadian flexible packaging market by purchasing Montreal blown film maker Emballage MPP Inc.

With the deal, Dallas Plastics gains MPP's 20,000-square-foot plant, which employs 20.

Mesquite, Texas-based Dallas Plastics is part of the portfolio of private equity company Sole Source Capital LLC. SSC announced the MPP purchase Aug. 15 but did not disclose financial terms.

Dallas-based Sole Source Capital said the acquisition boosts Dallas Plastics' scale and significantly expands its geographic market reach.

MPP President Angelo Orlando, who will be assisting with strategic and operational matters going forward, said the sale benefits both the company he founded in 2008 and Dallas Plastics.

"We have no doubt that MPP will be an excellent foothold into Canada for Dallas Plastics. MPP stands to benefit from Dallas Plastics' scale, connectivity with resin suppliers and operational expertise," Orlando said in a news release.

Dallas Plastics serves the food packaging, medical, industrial, agricultural and consumer products markets. MPP makes a range of blown polyethylene film products, primarily selling to the food packaging, medical and logistics markets.

The MPP acquisition is the second for Dallas Plastics since it became part of SSC almost two years ago. Dallas Plastics bought Hi-De Liners Inc. of Orange, Mass., in June 2021, giving Dallas Plastics its fourth plant. That facility makes high and linear low density PE film as well as drum and trash liners, medical waste bags and barrier sheeting. Its products are also used in flexible packaging for the bakery, hospitality and seafood markets.

Dallas Plastics reported 2019 sales of $47 million, placing it at No. 95 in *Plastics News*' latest ranking of 171 North American film and sheet makers. SSC declined to provide financial information for MPP.

ABC

Continued from Page 1

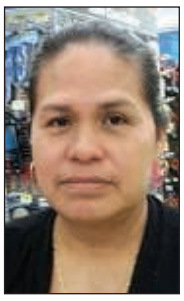
Williamson Barnes, a lawyer with Maynard Cooper & Gale LLP in Birmingham, Ala. "ABC Polymer is not guilty of the charges alleged … and looks forward to the opportunity to vigorously defend itself. ABC Polymer has always been, and will continue to be, fully committed to its team members and workplace safety."

But DOJ in its complaint said the company "willfully violated" federal safety regulations for machine guarding.

The charge against the company is a class B misdemeanor, which DOJ said is the only federal criminal charge covering workplace safety violations.

If convicted, ABC Polymer also faces a fine of up to $500,000, or twice the financial gain to the defendant or twice the financial loss to another, whichever is greater, DOJ said. It also could be liable for restitution to the victim, the department said.

It's not the first time ABC Polymer, which makes flexible intermediate bulk containers and bags for industrial customers, has been in court over the incident. In June, a judge in Jefferson County Circuit Court awarded the family of the worker killed, Catalina Estillado, $3 million, in a wrongful death lawsuit brought by her family.



Estillado

Judge Elisabeth French wrote in her ruling that "evidence clearly establishes that [executives] removed a safety guard or device by either failing to install the interlocking limit switch and/or bypassing a safety device by training employees to cut wraps by lifting the barrier guard while the rollers were in operation."

As well, an Occupational Safety and Health Administration investigation resulted in the company paying a $155,000 fine in 2019 over the incident, including $103,000 for one "willful" violation of machinery safety standards and smaller fines for violating lockout and tagout rules, OSHA records show.

The Department of Justice statement said OSHA standards require machinery like the extrusion line to be guarded while it is operating.

The government's statement alleges that the extrusion line in this case had been manufactured with a metal barrier that would have protected the operator from the pinch points of the rollers, as well as a mechanism that would have stopped the rollers from spinning when the guard is lifted.

Detailed DOJ charges

The DOJ's seven-page criminal complaint filed in U.S. District Court in Birmingham, Ala., said that Estillado was hired on about April 25, 2017, and alleges she was given less training than normal before she was assigned to work unsupervised on production lines. It said employees normally received 90 days of training before working unsupervised on production machinery, but Estillado was only given 19-30 days of instruction before working on her own.

DOJ said the extrusion line, which moved at 70-90 feet per second when running, had a barrier guard that could be pulled down to protect operators from pinch points in the rollers. But the government's complaint said the company did not install an interlocking limit switch that would slow down or stop the roller drums if the guard was lifted.

As well, DOJ said the company did not follow a 2008 written policy that said machine guards had to remain in place, except when maintenance was being done and the machine's controls were locked out by the technician.

"Notwithstanding its written policy, ABC Polymer had a standard practice of operating Line 3, Godet 1 with the guard in the 'up' or unprotected position when the rollers were moving, to facilitate operators reaching between or near the roller drums to cut tangles in the plastic sheet without stopping the line," the complaint said.

> **"Evidence clearly establishes that [executives] removed a safety guard or device by either failing to install the interlocking limit switch and/or bypassing a safety device by training employees to cut wraps by lifting the barrier guard while the rollers were in operation."**
>
> Judge Elisabeth French
> Jefferson County Circuit Court

The complaint said Estillado was unsupervised on Aug. 16, when she was trying to cut out jammed material, became entangled in the roller drums and was killed. The lines had a gap of about 5 inches between the roller drums at their narrowest point, DOJ said.

"Before Aug. 16, 2017, numerous ABC Polymer employees had been severely injured from interactions with the unguarded moving rollers at the facility," the government's complaint alleges.

One recent report said it's rare for the federal prosecutors to bring charges against companies over workplace deaths or injuries.

A report in April from the American Federation of Labor and the Congress of Industrial Organizations said OSHA referred only nine worker safety cases to the Department of Justice in the last federal fiscal year, compared with 123 criminal prosecutions by the Environmental Protection Agency. The AFL-CIO said weak criminal penalties in federal safety laws are a disincentive for prosecutors to bring charges, compared with environmental cases.

POLYMER POINTS
WITH FRANK ESPOSITO

'Polymer Points' by Frank Esposito is a monthly column that looks at the resin industry.

Most resin prices take a July slide, with PS the exception

North American commodity resin prices were on the move in July, with four materials falling and one seeing a sizable increase.

Improving supplies and softening demand sent North American prices for polyethylene, polypropylene, PVC and PET bottle resin down in July. PP continued its downward slide, tumbling 7 cents in July after a 10-cent drop in June. PET bottle resin prices dropped 12 cents in July, PE prices fell an average of 3 cents per pound and PVC fell 5 cents.

The 7-cent July drop for PP matched a 4-cent drop in polymer-grade propylene (PGP) monomer feedstock and was increased by PP buyers winning an additional 3 cents from suppliers. Combined with other increases and decreases, PP prices now are down a net of 12 cents so far in 2022.

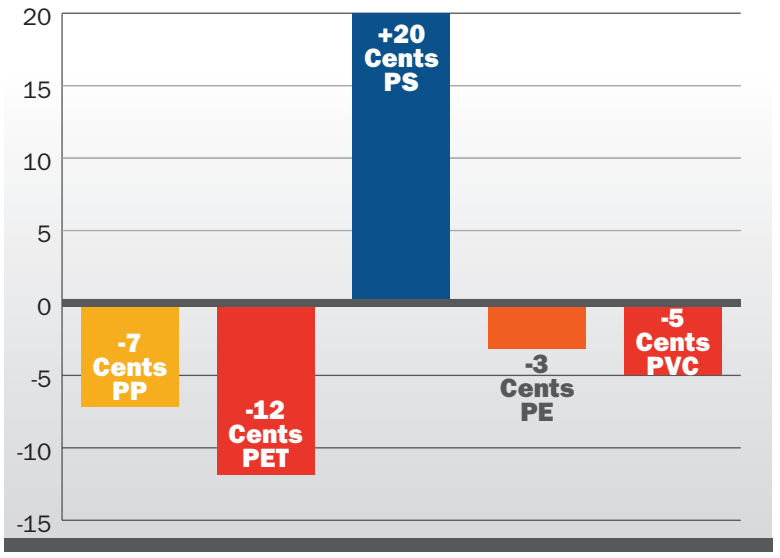
Market sources told *Plastics News* that regional PP demand has declined slightly in recent months. Strong North American gasoline demand also had increased supplies of propylene, which is a byproduct of gas refining.

PET bottle resin's 12-cent drop gave back almost all of a 13-cent June increase. Even with the July drop, prices for the materials are up a net of 36 cents so far in 2022. According to market sources, the July PET price decline was the result of a large price decrease for paraxylene (PX) feedstock, combined with lower demand and higher inventories of PET.

Strong seasonal demand for bottled water and other beverages had played a role in earlier PET price increases, as well as a lack of new capacity and freight and logistics challenges. Higher gasoline demand had lifted prices for PX, which also is used as a gasoline additive.

RESIN PRICING

Average pricing changes for July in cents per pound.



PE prices fell 3 cents after a flat June and a 3-cent hike in May that producers won after an extended battle. Prices for all grades of PE now are up a net of 4 cents so far in 2022.

Dow Inc.'s Packaging and Specialty Plastics unit, including PE resin, saw second-quarter sales grow 15 percent to $8.2 billion. The unit's sales volume was up 5 percent for the quarter, primarily from gains in energy, infrastructure and packaging.

At LyondellBasell Industries, the firm's olefins and polyolefins Americas unit, including PE and polypropylene, posted second-quarter sales growth of 9 percent to almost $4.1 billion. The unit's PE resin sales volume in pounds grew 6 percent to 1.75 billion pounds for the quarter.

Regional PE supplies will be impacted this year by the start-up of Shell Chemical's massive 3 billion-pound-capacity PE unit in Monaca, Pa. Market watchers said the site could be shipping commercial amounts of PE by the end of summer.

"I am — and I am sure converters are as well — concerned about where the economy may be headed," said Esteban Sagel, principal with Chemical & Polymer Market Consultants in Houston. "Uncertainty about the economy, together with erosion in spot prices, likely has [PE and PP] buyers on the sidelines waiting for prices to continue to slide."

For suspension PVC, a 5-cent drop ended two months of flat pricing. Regional PVC prices now are down a net of 4 cents since Jan. 1. Construction activity is a main driver of PVC consumption. U.S. housing start activity in June came in at an annual rate of almost 1.69 million, up more than 1 percent vs. the same month in 2021, but down almost 1 vs. May. This trend might be an indication of PVC demand leveling off.

In a recent report, consulting firm C-MACC of Houston said that "given a still wide profit spread between monomer and polymer levels, we foresee downward pressure on domestic U.S. polymer [resin] prices, even considering potential export market support due to curbed production." The report added that U.S. polymer prices, on average, "continue to reflect a price premium to export markets."

PS alone in increase

Polystyrene was the only commodity resin to see higher prices in July, and the market outdid itself with an attention-grabbing 20-cent hike. A chaotic market for benzene feedstock sent PS prices soaring but could be sending them down about the same amount in August.

PS prices moved up an average of 20 cents per pound in July, as benzene prices ballooned 42 percent to $6.82 per gallon. Benzene is used to make styrene monomer, which is then polymerized into PS. PS prices had been up 9 cents in June and are up a total of 52 cents since February.

But a turnaround could be right around the corner, as contract benzene prices for August closed at $4.52 per gallon, a plunge of 33 percent vs. July. Major regional PS makers have announced price decreases of 15-25 cents for August, a rare step.

Tight supplies and high prices for U.S. gasoline had driven benzene prices higher in recent months. Benzene is added to gas to increase its octane rating, which can improve engine performance. Average U.S. gas prices peaked at just over $5 per gallon in mid-June but have since declined and were just under $4 on Aug. 10. That change has impacted benzene markets as well.

"The benzene market has been wild this year, to say the least," said Shayan Malayerizadeh, a market analyst with PetroChem Wire in Houston. In an email, Malayerizadeh said there were several factors that led to higher prices for the material.

The U.S. Gulf Coast benzene market "is structurally short," he said.

"We rely heavily on imports to balance out the market," he added. That dependency grew even more last year when Phillips 66 removed some capacity for the material, while imports between mid-2021 and mid-2022 were "well below historical average."

The market then took a quick turn in July and August, with octane values falling and styrene producers starting to reduce rates and selling their benzene inventory back. Because of increased imports and reduced export options, there's now a possibility that some U.S. styrene producers will idle their plants, Malayerizadeh said.

North American prices for ABS resins went in the opposite direction in July, decreasing by an average of 10 cents per pound. Increasing inventories and improved availability of imports made up for higher prices for styrene monomer. Market sources said that further price reductions for ABS and other engineering resins could hit the market in August and later in 2022.

In feedstocks, oil and natural gas prices went in drastically different directions in July. West Texas Intermediate oil prices opened the month at $105.80 per barrel but dropped to $98.60 by the end of the month, for a decline of almost 7 percent. Prices since that point have slid another 12 percent to close at $86.50 on Aug. 17.

Markets for natural gas, used as a feedstock to make PE and PVC, started July at $5.42 per million British thermal units but surged almost 52 percent to $8.23 by the end of the month. Those prices have continued to rise, moving up another 13 percent to close at $9.33 on Aug. 17.

Plastics News Data Center

RESIN PRICING CHART

Plastics News®

www.plasticsnews.com

As of Aug. 18

Prices are in U.S. cents per pound for prime resin, unfilled, natural color, FOB supplier, unless otherwise noted. Prices are generated from interviews with buyers and suppliers.

The information provided is based on sources believed to be reliable, but its accuracy or timeliness is not guaranteed and no warranties of any kind are provided. *Plastics News* does not intend to specify the price of the materials listed. For price quotes on specific materials, contact the supplier. *PN* discourages use of this chart as a single-source index for price contracts. *PN* does not buy or sell resins.

***Plastics News* resin pricing for thermosets, certain engineering thermoplastics and high-temperature thermoplastics are published in the last issue of each month.**

Data can be viewed anytime online at www.plasticsnews.com. Paying *PN* subscribers also can access historical resin pricing data and graphs from our website.

Updates

- An arrow, up ▲ or down ▼, indicates a market price change in that direction from the previous week.
- A "P" indicates that a price change for that material is pending.
- A bullet ■ indicates a correction in the published price.

Highlights

- No resin pricing changes this week.

Commodity Thermoplastics

Key: I - Annual volumes greater than 20 million pounds II - Annual volumes of about 2 million to 5 million pounds

Resin/Grade	Volume category I	Volume category II
HDPE		
Blow molding:		
Copolymer (HIC)	84-86	98-90
Homopolymer (Dairy)	84-85	86-89
Drums	86-88	89-92
Injection, general-purpose	80-81	83-85
Extrusion:		
Film, HMW	86-88	90-93
Film, MMW	89-90	94-96
Pipe, HMW	94-96	99-102
Pipe, MMW	97-100	101-103
Sheet	82-84	86-88
Rotomolding, powder	—	95-98
LDPE		
Injection:		
General-purpose	—	96-98
Lid resin	94-96	98-100
Extrusion:		
Coating, paper	94-96	—
Film, liner	89-91	92-97
Clarity film	87-89	90-93
LLDPE		
Butene-1 comonomer:		
Injection, general-purpose	—	77-81
Extrusion, liner film	103-106	107-109
HAO comonomer:		
Injection, general-purpose	—	83-85
Lid resin	85-88	91-94
Extrusion, liner film	79-81	83-86
Rotomolding, powder	—	102-107

For pricing information on virgin thermoplastic or thermoset resins, contact Frank Esposito, phone: 330-703-7290, email: fesposito@crain.com

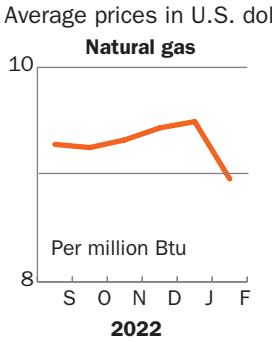
Resin/Grade	Volume category I	Volume category II
POLYSTYRENE		
Crystal:		
Injection, general-purpose	186-188	190-194
High-heat	190-194	196-197
High-impact:		
Extrusion	193-195	198-200
Injection	192-194	198-199
High-heat, injection	196-201	202-204
Flame-retardant	226-230	232-236
EPS, cups	185-188	—
Unmodified	179-182	178-187
PVC RESIN		
Suspension resin:		
Injection, general-purpose	116.5-119.5	119.5-121.5
Pipe grade	114.5-117.5	117.5-120.5
Dispersion resin:		
Homopolymer, G-P	95-99	101-105
POLYPROPYLENE		
Homopolymer:		
Injection, general-purpose	97-99	100-103
Extrusion:		
Fiber	96-98	99-101
Film	97-100	100-103
Profiles	100-103	105-112
Sheet	99-102	113-115
Random copolymer:		
Injection	100-102	103-105
Film	102-103	104-106
Blow molding	102-103	105-108
Impact copolymer:		
High-impact	111-115	116-119
TPO (in-reactor)	131-139	138-142

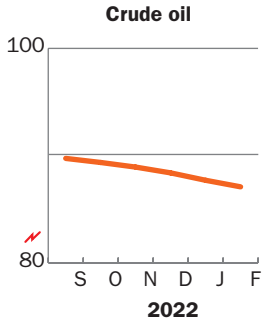
Resin/Grade	Volume category I	Volume category II
ABS		
Injection:		
Medium-impact	147-150	151-152
High-impact	152-153	155-159
Pipe fittings	137-138	141-145
High-heat	173-177	182-187
Flame-retardant	178-182	187-202
Extrusion:		
Pipe, general-purpose	149-151	154-159
Sheet, general-purpose	166-167	169-171
Blends/alloys:		
PC/ABS	—	191-196
Nylon/ABS	—	199-209
ACRYLIC, G-P	—	125-130
PET PACKAGING RESINS		
APET	81-83	84-86
Bottle resin	128-130	131-133
CPET	79-81	—

> Continued on page 30

Gas & oil futures

Average prices in U.S. dollars*





Source: Barchart.com Inc., Chicago

*As of Aug. 18

High-temperature thermoplastics

Resin/Grade	Volume category: I	II
FLUOROPOLYMER		
ECTFE	1250-1422	—
PTFE	670-765	—
PVDF	720-760	—
LIQUID CRYSTAL POLYMERS		
Injection:		
Glass-filled	610-980	—
Mineral-filled	550-810	—
Extrusion	945-1180	—
POLYAMIDE/IMIDE		
30% glass	—	1800-2600
POLYARYLATE	176-210	—
POLYETHERKETONE		
Polyetheretherketone (PEEK)	—	4500
POLYETHERIMIDE (PEI)		
Injection, general-purpose	800	880
30% glass	660	720
POLYPHENYLENE SULFIDE (PPS)		
35% glass, 30% filter	380-390	495-505
30% glass	595-605	740-765
POLYSULFONE		
Injection, general-purpose	—	450-650
30% glass	—	386-634

Thermosets

Key: I - Annual volumes of 2 million pounds to 5 million pounds
II - Annual volumes of about 200,000-500,000 pounds

Resin/Grade	Volume category: I	II
EPOXY		
General-purpose	100-112	—
Compounds:		
Coils, bushings	105-152	—
Resistors, diodes	—	227-286
Semiconductor:		
Novolac	—	212-246
Anhydride	—	214-297
MELAMINE MOLDING COMPOUND	135-175	—
PHENOLIC, G-P	75-85	—
POLYESTER, UNSATURATED		
General-purpose	174-195	—
Isophthalic	171-195	—
Specialty (bisphenol A, etc.)	—	230-265

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Thermosets

Resin/Grade	Volume category: I	II
POLYURETHANE, ISOCYANATES		
Polymeric MDI	105-115	—
80/20 TDI	110-120	—
UREA MOLDING COMPOUND		
Black & brown	—	95-100
White & ivory	—	105-110
VINYL ESTER		
Anti-corrosion	—	204-223
Anti-heat & corrosion	—	229-237

Engineering thermoplastics

Key: I - Annual volumes greater than 1 million pounds
II - Annual volumes of about 300,000 to 500,000 pounds

Resin/Grade	Volume category: I	II
ACETAL		
Homopolymer	167-174	178-184
20 percent glass	—	209-224
Copolymer	145-155	160-169
25 percent glass	—	190-205
CELLULOSICS		
Acetate	—	178
Butyrate	—	175
Propionate	—	175
NYLON		
Type 6	195-205	208-212
Type 6/6	242-250	254-265
POLYESTER		
PBT, injection	119-124	129-134
30 percent glass, FR	154-159	164-174
PET, injection	118-123	128-138
30 percent glass, FR	155-165	165-175
POLYCARBONATE		
Blow molding	256-266	287-297
Injection, general-purpose	240-249	244-269
20 percent glass	256-266	287-303
Structural foam	238-247	274-291
Flame-retardant	271-288	299-309
Extrusion, sheet	239-248	251-279
Optical media	222-231	232-251
PPO/PPE		
Injection, general-purpose	—	123-187
20 percent glass	—	179-272
Structural foam	—	131-207
Extrusion	—	148-239

Engineering thermoplastics

Resin/Grade	Volume category: I	II
POLYURETHANE		
Ester type, injection	189-206	213-222
Extrusion	216-238	252-270
Ether type	252-265	297-306
SAN, general purpose	128-136	140-164
SMA		
General-purpose	—	179-183
High-impact	167-178	187-190
Flame-retardant	217-225	—
TPE		
Polyester	—	325-400
Olefinic (compounded)	80-115	120-135
Styrenic	160-190	220-270
UHMW-PE	120-124	136-146

Recycled plastics

Resin/Grade	Clean regrind or flake	Pellets
ABS		
Mixed colors, industrial	83-89	113-118
POLYCARBONATE		
Clear, industrial	86-96	—
Mixed colors, industrial	83-87	91-97
POLYETHYLENE		
HDPE:		
Natural, post-consumer	51-55	100-104
Mixed colors, post-consumer	29-33	60-66
Mixed colors, industrial	31-36	36-40
HMW HDPE film, post-consumer	—	47-51
LLDPE stretch film	—	52-54
LDPE film:		
Clear, post-consumer	—	52-54
Colored, post-consumer	31-35	48-52
PET BOTTLES		
Clear, post-consumer	87-90	115-120
Green, post-consumer	50-59	48-57
POLYPROPYLENE		
Industrial	30-32	68-86
POLYSTYRENE		
Industrial	44-46	55-59
High-heat, crystal, post-consumer	9-15	53-59
PVC		
Clear, industrial	46-52	—

For pricing information on recycled resins, contact Jim Johnson, phone: 937-319-0469, email: jpjohnson@crain.com

Pregis

Continued from Page 1

replacement for the manufacturing component, we have been unable to do so, leaving us with no choice but to cease manufacturing operations for the Microfoam product line," the statement said.

Officials added that the decision "in no way reflects the performance of our Wurtland employees."

Roots with DuPont, Ametek,Tenneco

According to the Pregis website, Microfoam is a PP sheet foam that can be used as protective packaging in furniture wrap, food delivery bags and other applications. Pregis had made Microfoam since acquiring the site and technology from DuPont Co. in 1995.

The Microfoam business was originally part of DuPont Co. It was sold to Ametek Inc. in 1983, then to Astro Valcour Inc. in 1995. Tenneco Packaging bought Microfoam in 1997 when it purchased Astro Valcour. Tenneco Corp. then spun off its packaging unit in 1999, renaming it Pactiv, and Pactiv's flexible and protective packaging business became Pregis in 2005.

Pregis officials said in the statement that "as an organization, we are extremely growth focused as demonstrated by the opening of eight new U.S. facilities in the past two years and two new locations in Europe. … We continue to invest the 30-plus facilities in North America, including a Hopkinsville, Ky., facility."

"As a growth-focused organization, closing an operation and sunsetting a truly unique solution with such a respected history is a last resort," they added.

With estimated North American film and sheet sales of $605 million, Pregis ranks 12th in the most recent *PN* survey of film and sheet manufacturers. The firm employs more than 2,200 at 21 North American sites, as well as at production sites in Europe.

Pregis Corp.'s Microfoam-brand polypropylene foam is used as a protective wrap. Pregis Corp. photo

In September 2021, Pregis announced it would spend $32 million to expand blown film extrusion operations in Grand Rapids, Mich., including construction of 55,000 square feet of additional space.

Global Supply

Continued from Page 3

brand of products, Archer said.

Global Supply's website shows products divided into two categories: one for thermal materials and die cutting — think thermally conductive gap pads and silicone tubes — and the other for printed circuit board (PCB) hardware, such as card guides, card ejectors and threaded nylon components.

The Innovative Plastics brand includes PCB hardware products.

"The product lines acquired are complementary to our TekNational business, which has been at the forefront of the electronic hardware component and thermal insulation field for over 41 years," Archer said.

Global Supply officials are looking to buy other companies that produce electronic hardware components and fasteners with a focus on aerospace, defense, advanced electronics and other markets, Archer added.

For the Innovative Plastics acquisition, Global Supply was represented by Calabasas Capital, a Calabasas, Calif.-based investment banking firm that does business as Fallbrook Capital.

Perspective

Continued from Page 6

by President Trump in 2020 and reinstated by President Biden in 2021. But other issues have curbed the flow of foreign engineers into the U.S., including two years of COVID-19.

STEM workers — people employed in science, technology, engineering and math — represent a growing piece of the labor pool, according to a report this summer from the American Immigration Council. Twenty years ago, there were 7.5 million STEM jobs in the U.S. Today there are 10.8 million. STEM job growth is expected to outpace non-STEM jobs through this decade.

Those are skilled jobs that include far more than auto engineers, of course. But they also include auto engineers. The point being this: If you think it's already tough to fill all the industry's engineering positions, just wait till 2025, 2027, 2029. That's when the industry expects to be churning out new EVs and batteries and technologies.

That's when things will get really hot around here.

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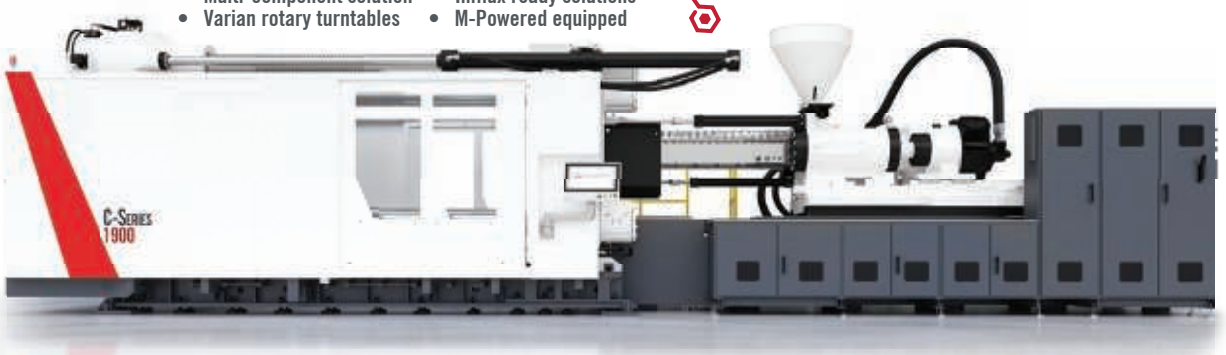

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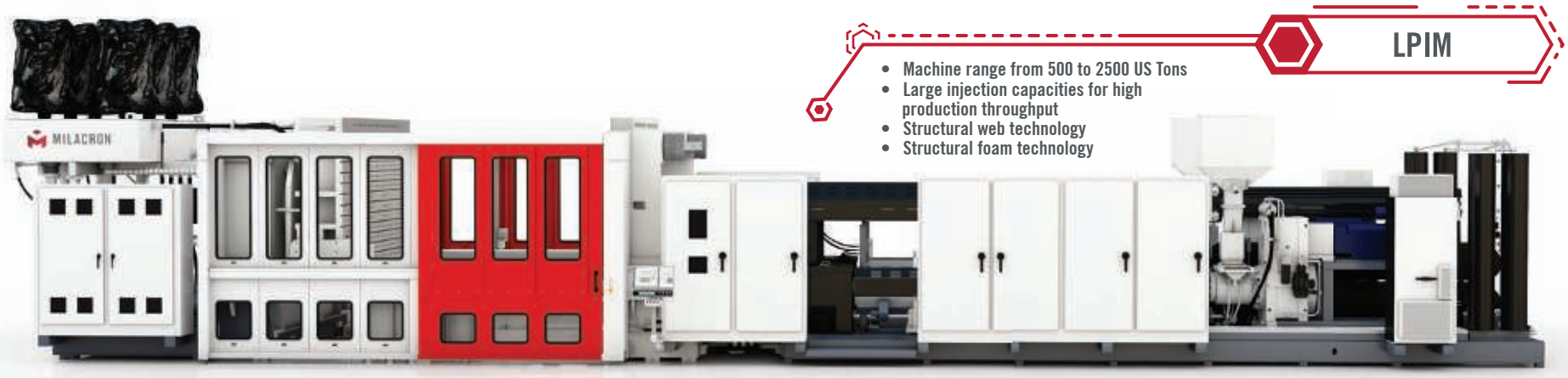

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