





ExxonMobil Introduces New Paxon™ SP5504 HDPE, a Step-Change in Performance for Blow Molded Bottles and Containers

Houston, Texas – ExxonMobil has developed a new Paxon™ HDPE grade, SP5504, which offers a paradigm shift in the properties normally associated with the currently available unimodal HDPE resins. Offering a step-change in ESCR (Environmental Stress Cracking Resistance) performance without compromising stiffness, impact, top load performance, or processability, Paxon™ SP5504 is ideal for household and industrial chemical (HIC) bottles and containers for products like bleach, wipes, and agricultural chemicals.

- Excellent ESCR without compromising stiffness, impact, or top load
- Melt index and density similar to conventional unimodal HDPE for easy processing
- PCR can be increased due to the better property balance of the virgin resin

"Until now, converters have often had to compromise to get the right ESCR performance of blow molded HDPE bottles and containers," said Dr. James Stern, HDPE business development manager, North America & EMEAF, ExxonMobil. "But, because there is no compromise in density or melt index, Paxon™ SP5504 enables converters to create cost-effective, innovative packaging solutions for household and industrial chemicals."

In terms of performance, processability and value-based performance, Paxon™ SP5504 fills the space between unimodal and bimodal HDPE grades.

"Because of the superior performance of Paxon™ SP5504, it can be used as a drop-in solution for unimodal HDPE but with a better balance of properties," said Stern. "Or it can be used to replace bimodal HDPE grades in applications that have had to be over-engineered to obtain a desired balance of ESCR and stiffness."

Paxon™ SP5504 enables the production of multiple applications from standard blow molding through to more demanding HIC type applications, plus more complex molded designs can be fabricated with this one material. Brand owners can now be more creative with their packaging designs, while converters can reduce polymer inventories.

An added bonus of using Paxon™ SP5504 that is being further researched is that PCR (post-consumer recyclate) content can be increased with minimal impact on its properties.

"Blow molded HDPE parts typically contain PCR in the core of multi-layer bottles and containers," said Mark Canright, global polyolefin product technology, ExxonMobil. "In California, for example, the current mandate for PCR content in blow molded HDPE parts is 25 percent and this is expected to rise in the next year. But, adding PCR can impact the properties of the virgin material, such as ESCR and top load. Paxon™ SP5504 enables converters to add even more PCR without significantly compromising the properties of the finished parts."

With the industry driving towards increased recycling of post-consumer plastic waste (PCR), ExxonMobil has demonstrated value-in-use at PCR levels at and above 25 percent, which may help brand owners and converters to meet changing sustainability targets.

"This new product will be an 'enabler' for the value chain to create truly innovative solutions for blow molded HDPE bottles and containers," said Stern. "Ongoing commercial tests and trials with converters and brand owners are proving highly successful, so we are confident about the interest this new solution will generate across the value chain."



Paxon™ SP5504 offers excellent ESCR without compromising stiffness, impact, top load performance, or processability

To learn more about how ExxonMobil is helping its customers create tomorrow's solutions today with Paxon™ HDPE, please visit: exxonmobilchemical.com/HDPE

About ExxonMobil PE

The ExxonMobil polyethylene portfolio offers Converters and Brand Owners an extensive range of performance polymers as well as specialty co-polymers and additional polyethylene grades for numerous applications. Our performance polymer flagship brands deliver superior mechanical performance and unparalleled properties — ExceedTM XP for excellent processability, ExceedTM for outstanding sealability combined with best-in-class optics, and EnableTM for easy processing resulting in improved operations. LDPE, LLDPE and HDPE polymers are also available.

With products that deliver critical properties such as strength, durability and toughness, easier sealability, and outstanding optics, our leading-edge polyethylene formulations help create, protect and promote products throughout the packaging, agriculture, industrial, personal care and hygiene markets. From store shelves, to harvesting, to shipping, to the factory, our products help reduce risk of waste, breakage and spoilage across the value chain. www.exxonmobilchemical.com/PE

About ExxonMobil

ExxonMobil, one of the largest publicly traded international energy companies, uses technology and innovation to help meet the world's growing energy needs. ExxonMobil holds an industry-leading inventory of resources, is one of the largest refiners and marketers of petroleum products, and its chemical company is one of the largest in the world. To learn more, visit exxonmobil.com and the Energy Factor.

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