



## Press Release

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### **VERTELLUS INTRODUCES THREE NEW ZEMAC<sup>®</sup> MASTERBATCHES AT K 2016, EXPANDING ACCESS TO ADVANCED TECHNOLOGY FOR PA COMPOUNDING**

**DÜSSELDORF, Germany** — Oct. 19, 2016 — Vertellus, a leading global supplier of additives to the plastics and polymer industries, is debuting here at K 2016 (hall 5, stand C08-2) three new ZeMac<sup>®</sup> masterbatches for enhancing polyamide (PA) compounding. The first two, ZeMac<sup>®</sup> Extend L65 and L68 masterbatches, are chain extenders and branching agents that convert low relative viscosity (RV) PA to branched high RV PA with higher mechanical and thermal performance than linear high RV PA. These masterbatches can also be used for upgrading recycled or prime nylon compounds. The third, ZeMac<sup>®</sup> Extend P62 masterbatch, is now the only product on the market today that is able to smoothly compatibilize PA and recycled polyethylene terephthalate (PET) to reduce material costs. These pelletized masterbatches complement ZeMac<sup>®</sup> E60-P powder, which is also used as a chain extender and recycling agent.

“These new, highly innovative masterbatches demonstrate the versatility and unique capabilities of our ZeMac copolymer technology,” said Ashok Adur, Ph.D., global commercial development Director, Plastics at Vertellus. “Until now, compounders whose processing systems did not accommodate powder additives were unable to take advantage of the benefits that our ZeMac technologies provide. With these new masterbatches our customers can expand the range of compounding equipment on which ZeMac copolymers can be used to give them new options for cutting costs without sacrificing performance. The new ZeMac masterbatches also showcase how Vertellus continually develops new innovations to meet the needs of the plastics and polymer industries.”

ZeMac copolymers enable cost reduction and a boost in performance, profit and sustainability. First, these results are achieved by converting low RV PA to branched high RV PA during compounding by replacing conventional high RV PA – produced via a solid state polymerization (SSP) process – with a more flexible, lower-cost compounding process during which chain extension and branching occur. Second, ZeMac can be used to compound polyamides with 15 to 35 percent recycled PET, to produce compatibilized alloys at much lower cost without sacrificing performance. Besides the existing ZeMac E60-P grade, the new masterbatches introduced today extend to Vertellus’ customers these unique value propositions in a wide range of performance and cost benefits.



## Higher Profits, Performance and Sustainability

ZeMac Extend L65 masterbatch for injection molding and ZeMac Extend L68 masterbatch for film and profile extrusion and blow molding are used to cost-effectively convert low RV PA to branched high RV PA at low loadings. Effective with virgin and recycled resin, they transform PA into a shear-thinning material with high melt strength at a lower cost than conventional SSP-produced high RV nylon. Shear thinning also enables lower-cost processing by converters compared to conventional high RV PA. These ZeMac masterbatches also enhance flexural modulus, tensile strength, impact strength and elongation. Target applications include automotive under-the-hood parts and pipes for oil and gas.

ZeMac Extend P62 masterbatch compatibilizes PA and recycled PET (up to 35 percent of the total) by creating interfacial adhesion between these two otherwise incompatible plastics. This new product also reduces material costs and can increase profits by allowing clean post-consumer/post-industrial PET to be incorporated. Additionally, ZeMac Extend P62 masterbatch improves the flexural modulus of the compound to mirror that of 100 percent virgin PA, and raises electrical performance above that of neat PA. Compatibilized PET/PA compounds using ZeMac masterbatches can be used in applications such as office furniture, sporting goods, hand tools and small appliances.

All three new masterbatches include internal and external lubricants for flowability of the melt over processing equipment and for easier demolding. The new grades give compounders expanded choices to complement ZeMac E60-P powder, which can be used in the same scenarios, except in the case of thin parts and/or smooth profiles and films. Here, ZeMac Extend L68 masterbatch ensures even distribution of the additive, which is critical for smooth, uniform surfaces with no gel deposition. Particularly in thin parts, the new masterbatch pellets overcome the challenge of fast reactivity between the ZeMac copolymer and nylon 6/6 by accelerating dispersion in the matrix. The E60-P powder grade is the lowest cost option, but where compounders do not achieve adequate uniform feeding and incorporation, the new masterbatch pellet grades can overcome these challenges.

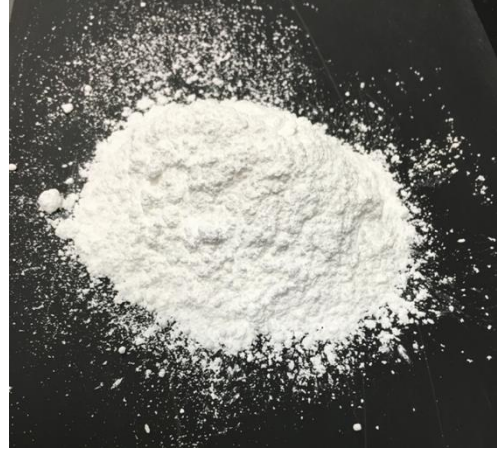
### About Vertellus

Vertellus is a specialty chemicals company focused on the manufacture of ingredients used in pharmaceuticals, personal care, nutrition, agriculture, industrial and a host of other market areas affected by trends favoring sustainable technologies and chemistries. Vertellus is the largest, global producer of pyridine and picolines, specialty pyridine derivatives, DEET, castor oil derivatives and systems and a world leader in vitamin B3 and citrate polymer additives and systems. Vertellus benefits from a technically advanced global manufacturing base and has approximately 1000 employees. Vertellus is headquartered in the United States in Indianapolis, Ind. More information on Vertellus can be found at [www.vertellus.com](http://www.vertellus.com).

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**PHOTOS: Vertellus' New ZeMac<sup>®</sup> Extend L65 Masterbatch Pellets (left) and ZeMac<sup>®</sup> E60-P Powder (right) Enhance Polyamide Compounding**

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