



IMAGE: SHUTTERSTOCK/CAI PERFORMANCE ADDITIVES

# Pushing performance with PA additives

*Additive technologies allow PA performance to be optimised to meet new and demanding requirements, providing opportunities to cut cost. Chris Saunders reports*

This is an excerpt from the original article, prepared by VOELPKER®.  
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Compounding World is a free-to-read monthly global magazine for polymer compounders and masterbatch producers. It covers developments in plastics, additives, and compounding technology, as well as market trends and industry news.

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- Options for impact modification



IMAGE: SHUTTERSTOCK/VOELPKER

cant formulation. Cevo-process A-3105 from **Voelpker** is a processing aid that is said to provide a synergistic combination of lubricating, release- and dispersing agents that can help in distributing the flame retardant additive evenly in the PA matrix.

The A-3105 mixture was engineered especially for applications in PA compounding and is suitable for use in filled and reinforced compounds (where it can improve homogeneity of glass fibre distribu-

tion). It can also reduce PA degradation and promote improved surface quality.

A recent study carried out by Voelpker found that using it to replace calcium stearate in a UL94 V-0 classified formulation could reduce the amount of flame retardant by around 20%. According to the company, in achieving the V-0 rating with a standard lubricant such as calcium stearate requires a dosage rate of 12/5% melamin cyanurate in PA6 and 10% in PA66. Replacing the calcium stearate with Cevo-process A-3105 allowed flame retardant dosage to be reduced to 10% for PA6 and 8% for PA66. Comparable results are said to have been achieved with other halogen-free flame retardants such as phosphorus-based flame retardants.

Lotader 4700T, from **SK Functional Polymer (SKFP)**, is described as a "highly reactive terpolymer specifically designed for high impact resistant polyamide compounds." The new grade is produced using the company's tubular technology (indicated by the T in the grade name) and is said to offer a higher melt temperature and improved dispersion in PA resins than the Lotader 4700 grade it is based on.

According to SK, Lotader 4700T has been successfully tested in several polyamides, includ-

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