Carolina Color's G3 colorant technology can load dyes up to 43% for polystyrene (PS) foam-packaging customers.

Molders of Polystyrene (PS) foam packaging for applications such as poultry, meat, vegetables, and eggs are extremely cost sensitive. Carolina Color’s R&D team knew their G3 technology could exceed standard loading rates of 24 to 27 percent.

Carolina Color recently ran a trial for a manufacturer of foam trays that used roughly 100,000 pounds of colorant annually at a recommended let-down ratio of 1%. To properly compare the strength of Carolina Color’s G3 to the current vendor, a trial was conducted on a thin sheet (approximately 35 mil) at the same 1% let down of the incumbent supplier.

At a 1%, the G3 colors were far more heavily saturated, so the engineer running the trial reduced the let-down to 0.4% and then to 0.3% and was even able to go to 0.25%.

Still, the customer wanted to make sure there were no color variations from roll to roll due to the low let down ratio. The result? The remainder of the master-batch was run without issue. At a 0.25% let-down, the G3 delivered a color that well within the customer's spec and with no variation from from roll-to-roll. Also impressive was that they were able to use their existing color feeders to consistently deliver the color at the 0.25%. The manufacturer ran approximately 15,000 pounds of the foam roll material and formed the equivalent amount without issue. Needless to say, the color was approved and the now new customer enjoys a 22% savings in their colorant spend.

The Carolina Color G3 polystyrene trial results summarized:

- G3's offered a 75% lower let-down ratio than incumbent's colorant
- G3 can load dyes up to 43% versus industry standard 24-27%
- G3 uses the same resin, ie. styrene in styrene and PET in PET

"The results from the trial are mind-boggling. G3 delivered let-down ratios that no one in the industry can even begin to fathom. The bottom line is that polystyrene customers can now pay a lot less to color their products without sacrificing one iota of performance," stated Ronald M. Harris, PhD., the director of technology at Carolina Color.

Carolina Color is a family-owned business that manufactures color concentrates for the plastics industry from ISO 9001:2008 certified locations in Salisbury, NC and Delaware,

OH. These facilities provide 500+ customers with full-service production capabilities as well as comprehensive labs for color matching, quality control and analytical testing. Carolina Color is capable of producing over 25 million pounds annually.

For more information: www.carolinacolor.com