

HiCal™

Calcium Carbonate Concentrates for Polypropylene Thermoformed Sheet

- Significant Savings on Raw Material Costs
- Increased Productivity
- Improved Performance



Improved performance

- ✓ Significant savings on raw material costs
 - As much as \$0.02-\$0.06 per pound of material used depending on percentage of product used.
- ✓ Improved Productivity
 - Reduced cycle times
 - Improved processability and formability
- ✓ Better part performance
 - Increased stiffness
 - Improved ESCR
 - Reduced warpage
 - Minimize shrink

Products Available

- **HM10® Max** – 80% in LLDPE carrier (lower melt temperature of LLDPE allows excellent dispersion into PP, while maximizing cost savings)
- **HiCal™ LC** – 80% in PP carrier
- **HiCal™ LM** – 80% in a low melt PP carrier

What to Expect During Processing

1. No changes in the temperature profiles are required.
2. Lower extruder amps and pressures are often realized as a result of lower melt viscosity.
3. Color concentrates are added separately to the injection molding process and the final part appearance is relatively unaffected:
 - Un-pigmented parts will appear uniformly white
 - Colored parts may require reformulation

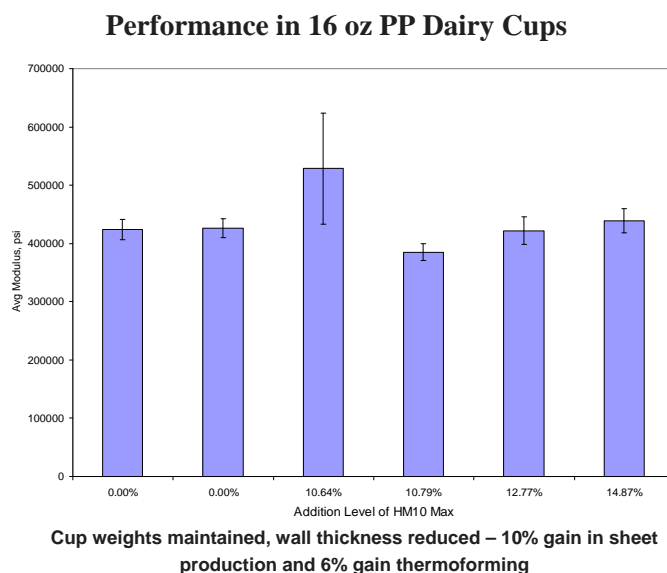
Productivity Gains

A major advantage of using calcium carbonate concentrates in polypropylene thermoforming is their ability to increase the thermal conductivity of the sheet and the molded part.

- Addition of mineral enables faster sheet line speeds
- Faster sheet heating and part cooling after forming can be observed

Physical Property Improvements

Calcium carbonate addition will increase the part density depending on the amount of concentrate used. To maximize cost savings, part weights should be maintained by reducing wall thickness from 4-8% depending on the level of concentrate used.



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