

PLUG ASSIST MATERIAL RECOMMENDATION FOR POLYPROPYLENE THERMOFORMING

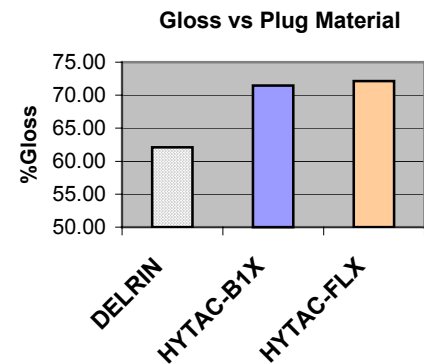
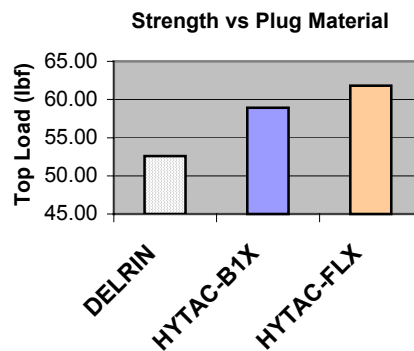
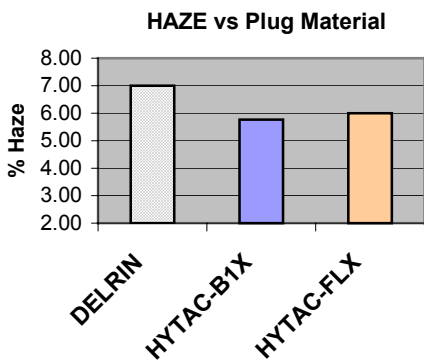


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TWO GRADES OF HYTAC[®] SYNTACTIC MATERIAL PROVIDE IMPROVEMENTS OVER DELRIN[®] (POM) PLUG ASSISTS

(Attleboro, MA October 15, 2004) – In thermoforming studies performed at Milliken & Company, CMT Materials, Inc. compared polypropylene containers produced using several grades of syntactic plug assist materials against those produced with Delrin and found significant improvements in clarity, gloss and strength using the *HYTAC* products. Two grades of syntactic, *HYTAC-B1X*, and *HYTAC-FLX* each produced more uniform deep-draw containers than Delrin under identical processing conditions due to the unique heat transfer properties of the materials.

Containers were produced on an Illig RDM-54 Thermoformer at Milliken's Spartanburg, SC facility. Each 28-ounce container was processed with ATOFINA 3289 Polypropylene homopolymer under matching conditions using the different plugs. Cups were then measured for thickness variation, strength, gloss, clarity and haze. In each instance, the *HYTAC* material formed containers with superior properties than those made with Delrin.



HYTAC plug assist materials also provide additional key advantages over Delrin and other solid polymer plug materials. The lower heat transfer properties allow quicker thermoformer start-up times, often within the first ten shots. Lower plug operating temperatures also reduce cycle times, improving output and decreasing operating costs.

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DELRIN[®] is a registered trademark of Dupont

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