CMT
Innovative Tooling **Materials** for Thermoforming

# HYTAC® LPX

Case Study

## Heavy Gauge Former Reduces Cycle Times with HYTAC® LPX

A large thermoforming company recently worked with CMT specialists to implement a new material specifically designed to meet the challenges of heavy gauge forming. The company had already switched from heated aluminum to HYTAC syntactic foam plugs several years ago, realizing a 12% savings in plastic usage due to more consistent and repeatable forming. The finished part is now made from 0.150" (3.81mm) HIPS on both rotary and single-stage machines.

Thanks to a new continuous improvement initiative, the company wanted to increase plug durability and reduce down-time. An initial fact-finding discussion revealed that the mounting locations for the large plug had changed from prior years and was likely contributing to a stress mismatch between the plug and the base plate. Rather than stop at a change of mounting location, the company decided to replace their older plugs with a new HYTAC LPX formulation and monitor the process.

HYTAC LPX, a tough formulation with friction enhancers, creates a solid syntactic outer shell over a lightweight composite core. Over a period of several months, the company installed three HYTAC LPX plugs.

According to the plant manager, operators have seen dramatic improvements in performance: *"Our plastic moves differently on the LPX which gives us the ability to pull material from the back of the part which is the top surface [of the plug]. This has been a problem with previous plug materials. In addition, the time frame to achieve a good part from a cold start is much quicker and we have been able to see some cycle time reduction."* The company has also reduced downtime thanks to proper plug mounting techniques and other best practices.

Ultra-low thermal conductivity of HYTAC syntactic foam allows for optimal forming while reducing stress in the sheet. Thanks to new formulations, HYTAC LPX is quickly becoming the syntactic foam of choice for the heavy gauge industry. LPX may be cast to near net shape and/or machined using conventional equipment.


## Reason #4: Improve Cycle Times

HTYAC® syntactic foam plugs do not require pre-heating and remain dimensionally stable during use. This allows for faster start-up times, maximizes throughput and cuts waste.

107 Frank Mossberg Drive · Attleboro · MA 02703 · USA · T +1 (508) 226-3901 F +1 (508) 226-3902
www.cmtmaterials.com info@cmtmaterials.com