

HYTAC® – FLXT

High temperature, PTFE impregnated copolymer syntactic

HYTAC-FLXT is the latest addition to CMT's HYTAC family of high performance syntactic materials. This thermoset copolymer syntactic is unique, combining the toughness and higher friction of HYTAC-FLX with the improved release characteristics of PTFE as found in HYTAC-WFT. The result is a new, tough syntactic with the just the right blend of properties at the plug/sheet interface. The low thermal conductivity and specific heat allow the proper material distribution; yet this rugged syntactic may be easily polished to a smooth surface for an excellent finish. This provides an ideal combination of the surface friction properties; sufficient drag to insure consistent part thickness even in deep draw applications while the PTFE-enhanced release characteristics eliminate part sticking.

FLXT has especially found use when thermoforming multi-layer films, providing excellent material distribution and reduced mark-off. These benefits are accomplished even when forming some of the multi-layer films with PE inner surfaces as well as EVOH containing multilayers. Processors have also realized instant start-up, shorter cycle times, and lower plug operating temperatures.

Like its predecessors, FLXT may be used in plug applications with a wide range of polymer sheet material, but is ideally suited to areas requiring high durability and high polish. HYTAC-FLXT also offers the added machining benefit of little or no dust and minimal wear on tools.

Improved HYTAC-FLXT has these outstanding attributes:

- **Superb Machinability**
- **Excellent Forming Characteristics**
- **Excellent Release Properties**
- **Good Dimensional Stability**
- **Excellent Toughness and Durability**
- **Temperature Resistance**
- **FDA Compliance for Food Applications**
- **Low Thermal Conductivity**

Typical Properties

Color	Dark Green
Density (ρ)	49-51 lb/ft ³ [785-817 kg/m ³]
Thermal Conductivity (k)	0.10 BTU/hr-ft-°F [0.17 W/m ² K]
Coefficient of Thermal Expansion (CTE)	20 x 10 ⁻⁶ in/in/°F [36.0 x 10 ⁻⁶ m/m/°C]
Compressive Strength	13,500 psi [93.0 Mpa]
Service Temperature	350°F [176°C]
Flexural Toughness (ASTM D790)	7.2 Psi [49.6 kPa]



Applications

HYTAC-FLXT incorporates PTFE directly into a higher friction syntactic structure to ensure consistent material distribution without sticking and material buildup on the plug surface even in deep draw applications. It has also proven to be highly effective with multilayer films.

Recommended for use with CPET, EVOH, LDPE, PC and RPET



**Innovative Tooling Materials
for Thermoforming**

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