

# HYTAC<sup>®</sup> - WFT

**High Strength, Smooth  
425°F Epoxy Syntactic Containing  
Teflon<sup>®</sup>**

## Technical Bulletin



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*Innovative Tooling Materials for Thermoforming*

### Overview

*HYTAC-WFT* is a material combining the unique technologies found in the high strength *HYTAC-WF*, and the smooth surfaced Teflon<sup>®</sup> containing *HYTAC-WT*. The result is a syntactic plug assist material with a smooth hard surface able to resist temperatures up to 425°F.

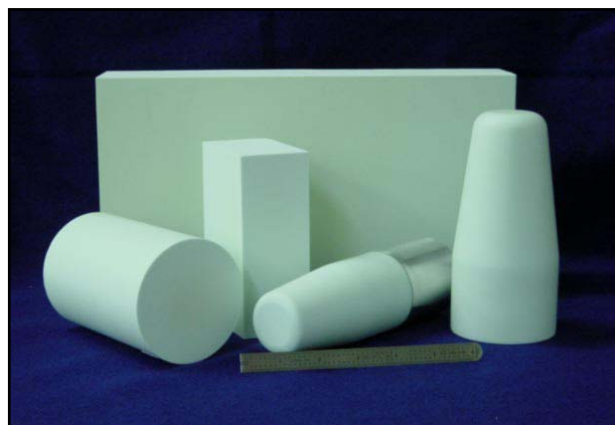
The intended uses of *HYTAC-WFT* are for the most difficult sheet sticking problems or in situations where an extremely smooth surface is critical to part quality. The material has also found applications in areas where excessive build-up of residue on the plug from the sheet is a problem. It is thought that the low heat transfer properties of the syntactic plug help reduce residue build-up due to the lower plug temperature. The Teflon-enhanced surface makes removal of impurities easy.

As with other syntactic materials, *HYTAC-WFT* offers the following advantages:

- **Low Thermal Conductivity and Specific Heat**
- **Dimensionally Stable**
- **Excellent Temperature Resistance**
- **Lightweight**
- **Easily Machined**
- **Variety of Shapes and Sizes**
- **Improved Toughness**

### Service

CMT is committed to providing cost effective, high performance, engineered material solutions to the tooling industry. We would be pleased to speak with you about your application. Call or FAX us today.



### Typical Properties

Property	<i>HYTAC-WFT</i>
Color	Light Green
Density ( $\rho$ )	58-62 lb/ft <sup>3</sup> [960 kg/m <sup>3</sup> ]
Thermal Conductivity ( $k$ )	0.19 BTU/hr-ft-°F [0.33 W/m <sup>2</sup> K]
Specific Heat ( $C_p$ ) per mass	0.22 BTU/(lb•°F) [0.92 kJ/(kg•°C)]
Coefficient of Thermal Expansion (CTE)	20.4 x 10 <sup>-6</sup> in/in/°F [37.2 x 10 <sup>-6</sup> m/m/°C]
Compressive Strength	17,500 psi [120 MPa]
Compressive Modulus	325 Ksi [2.28 GPa]
Service Temperature	425 °F [219 °C]