



100 Enterprise Drive  
Fort Loramie, Ohio 45845  
Ph: (937) 295-3672  
Fax: (937) 295-3677  
www.segen-online.com

## Technical Data Sheet

Tooling Technology offers a wide range of high-quality plug-assist materials. These thermoforming essentials are inventoried in various sized rods, sheets and blocks that can be easily cut and machined into shapes ranging from simple to highly complex. Please visit our website for detailed specification sheets, material properties, available sizes and pricing for each type of plug-assist product.

# 450° Syntactic Foam

This high performance epoxy syntactic foam is a good fit for high-temperature thermoforming plug assists. The composition results in high temperature resistance and smooth surface finish, with superior forming characteristics for APET, PP and CPET applications.

The glass sphere used in the 450° material is smaller in diameter than those found in conventional syntactic materials, resulting in a significantly smoother surface.

- Low Thermal Conductivity and Specific Heat.
- Dimensional Stability with a low Coefficient of Thermal Expansion.
- High Strength and Stiffness
- Excellent Temperature Resistance.
- Lightweight
- Available in Rod, Sheet or Block sizes.

### Machining:

Tooling: Cemented carbide or solid carbide with maintained sharp edge.

Cutting Speed: 325 ft/min

Rough Feed Rate: 50 in/min

Finish Feed Rate: 0.75 in/min

Coolant: None or Non-aromatic, water soluble



## Typical Properties

Color:	Red
Density:	50 lbs/ft <sup>3</sup>
Thermal Conductivity:	0.095 BTU/hr-ft- <sup>0</sup> F
Specific Heat:	0.33 BTU/lb <sup>0</sup> F
Coefficient of Thermal Expansion:	16 x 10 <sup>-6</sup> in/in/ <sup>0</sup> F
Compressive Strength:	16000 psi
Compressive Modulus:	440 Ksi
Service Temperature:	450 <sup>0</sup> F