

## Overview

OPTI-FORM F2X is the plug assist material to combine the toughness of engineering thermoplastics with the low thermal conductivity of a syntactic foam. Plug assists made from OPTIFORM F2X will resist the chips and dings associated with production abuse while reducing mark-off and sticking of difficult to process polymers. OPTI-FORM F2X maintains the high thermal stability required to process today's thermoformed polymers. In addition, OPTI-FORM F2X eliminates the machining difficulties of conventional syntactic foams. **This product does not produce dust during machining and finishing of plugs.**



## Technical Properties

Color:	White	
Density (ρ)	45 lb/ft <sup>3</sup>	720 kg/m <sup>3</sup>
Thermal Conductivity (k)	0,925 BTU /hr-ft-°F	[0.16 W/m°K
Specific Heat (Cp) per mass	0.43 BTU/(lb·°F)	1.80 kJ/(kg·°C)
Coef. of Thermal Expansion (CTE)	33 x 10-6 in/in/°F	60 x 10-6 m/m/°C
Compressive Strength	9,700 psi	67 Mpa
Compressive Modulus	298 Ksi	2.05 Gpa
Service Temperature	356°F	180 °C

## Benefits



### High Toughness and Durability

With high toughness, machine downtime due to damaged plugs is reduced. Less downtime, lower costs, more consistent quality.



### Superb Machinability

No dust collection equipment or respirators are required due to the large, non-abrasive chips. Plugs can be machined over three times faster than syntactic foam due to the easy chip formation.

**No more complaints from your machinists.**



### Excellent Temperature Resistance

OPTI-FORM F2X is specially formulated for service up to 180°C with minimal loss in mechanical properties.



### Shapes and Sizes

The material is provided in standard sized rods or sheets, but may be custom molded to meet your specific needs.

## Applications

OPTI-FORM F2X may be used in a wide variety of applications on sheet-fed, rotary, or in-line machines. It may also be used with most commonly thermoformed materials, and has proven quite effective with polypropylene and other polyolefins. **With PP & PET we will give better productivity** than any other epoxy syntactic.

OPTI-FORM F2X is ready to replace other thermoplastic syntactic materials such as Hytac® B1X.