# Eccostock®FFP

## One Part Free Flowing Syntactic Foam Powder



### FREE FLOWING SYNTACTIC FOAM POWDER

Eccostock FFP is a one-part, epoxy-based, free-flowing powder. It cures at elevated temperatures to a rigid, non-burning syntactic foam. It is extremely light weight and provides physical support as well as thermal insulation without increasing the weight or dielectric constant. Eccostock FFP exhibits minimum shrinkage during cure, exerting minimum stress on delicate components. Cured material can be easily removed with tools enabling access to repair or replace components.Since cured Eccostock FFP is porous, application of an epoxy coating will reduce moisture absorption.

### FEATURES AND BENEFITS

- Low cost
- Low shrinkage during cure
- No mixing required and easy to use as it is a one part curing system

### MARKETS

- Commercial Telecom
- Security and Defense

### SPECIFICATIONS

| TYPICAL PROPERTIES | ECCOSTOCK FFP |
|---|---|
| **Temperature Range °C (°F)** | -65 to 175 (-85 to 347) |
| **Density, g/cc** | 0.24 |
| **Compression Strength kPa (psi)** | 1000 (150) |
| **Dielectric Constant @ 8.6 GHz** | 1.25 |
| **Loss Tangent @ 8.6 GHz** | 0.005 |
| **Dielectric Strength, volts/mil** | 64 |
| **Thermal Conductivity W/mK** | 0.051 |
| **Volume Resistivity, ohm-cm** | $3.49 \times 10^{11}$ |

*Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.*

### APPLICATIONS

- Eccostock FFP is designed to infiltrate densely populated electronic packages, readily filling available volumes around components. It been used to stabilize crystal oscillators as well as other delicate components that need to be held in place or thermally protected.
- Eccostock FFP has also found its way into machinery operating in high vibration environments to keep electrical components from shaking apart.
- Low shrinkage during cure makes
- Eccostock FFP excellent for encapsulation applications.

### AVAILABILITY

- Eccostock FFP is readily available in pints, quarts, gallons, and 5 gallon containers. Pint and quart containers are also available in squeeze bottles for ease of application.

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## INSTRUCTIONS FOR USE

- Refer to the MSDS for full safety information before opening the container. Measures should be taken to avoid any contact with the skin and eyes, and a dust mask or respirator should be used to avoid inhaling the product.
- Mix the Eccostock FFP in the shipping container by lightly tumbling or shaking before use, as some components may separate during shipping and storage.
- In a well ventilated area, carefully pour the Eccostock FFP from a small paper cup or dispense from a squeeze bottle into the device being filled.
- Light to moderate vibration is recommended to maximize packing of the material.
- Eccostock FFP bonds well to itself and most other substrates. Mold release wax is recommended in applications where removal from a mold is necessary.
- Shelf life is 6 months if stored in a cool dry place out of direct sunlight at 21 °C (70 °F).
- Elevated temperature curing is required. Select one of the following recommended curing times and temperatures:

**Cure Times and Temperatures**

| |
|---|
| 24 hours at 100°C (212°F) |
| 4 hours at 120°C (248°F) |
| 2 hours at 150°C (302°F) |



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