Heat Dissipation in Allied Moulded Non-Metallic Enclosures

Determining Temperature Rise:
The temperature rise inside an enclosed and sealed Allied Moulded fiberglass enclosure can be approximated.

Calculate the enclosure Surface Area: SA = 2 x ((A x B) + (A x C) + (B x C)) ÷ 144
Note: Enclosure dimensions are A (height), B (width), and C (depth)

Calculate the Internal Heat Load: IHL = Heat Load Value (Watts) ÷ Surface Area
Note: Heat load value for the components to be mounted in the enclosure can be obtained from the component supplier. Typically this can be obtained in Watts however;
One Watt = 3.413 Btu/hour.

Find Temperature Rise: Use Internal Head Load to find the corresponding temperature rise in the chart below.

Example: Temperature rise in AM30240RT with components that use 200 Watts
SA = 2 x ((30 x 24) + (30 x 11.75) + (24 x 11.75)) ÷ 144 = 18.8 sq. feet
IP = 200 ÷ 18.8 =10.6 Watts/sq. feet
Temperature Rise = **47° F**

FIBERGLASS ENCLOSURES
INTERNAL TEMPERATURE RISE ABOVE AMBIENT