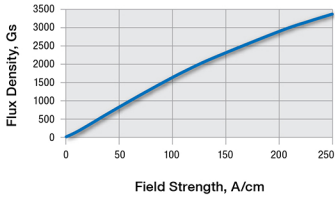
# ALPHAFORM *LF*

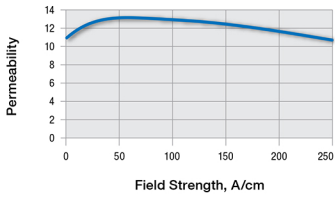
**Low to Medium Frequency Soft Magnetic Composite** [Frequency Range: 1 – 80 kHz]

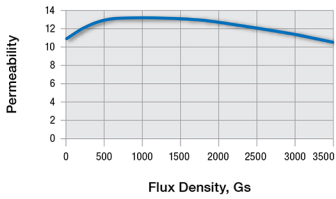
Formable soft magnetic composite developed on the basis of magnetic particles with a thermal-curing epoxy binder. This material may be used for quick and efficient installation to induction coils with low tolerances. No additional electrical insulation of the coil turns is necessary.

| Properties | Units | ALPHAFORM *LF* |
|---|---|---|
| Density ± 2% | g/cm3 | 4.1 |
| Initial Permeability | None | 11 |
| Maximum Permeability | None | 13 |
| Saturation Flux Density | Gs | 10,000 |
| Operating Frequency Range | kHz | 1–80 |
| Major Frequency Range | kHz | 3–50 |
| Temperature Resistance | Centigrade | 225 Long Term<br>300 Short Term |
| Thermal Conductivity | W/cm °C | 0.02 |
| Resistivity | kOhmcm | >15 |

AlphaForm LF core dramatically increased efficiency of the "earmuff" brazing coil




Please Note: Each grade of Fluxtrol material has its own distinctive properties that are the most beneficial to certain application conditions, process type, coil design, frequency, etc. Contact Fluxtrol for more information about which material is optimal for you.

FLUXTROL *100* | FLUXTROL *A* | FLUXTROL *50* | FERROTRON *559H* | ALPHAFORM *MF*


FLUXTROL Inc. Centre for Induction Technology®

1388 Atlantic Blvd. | Auburn Hills, MI 48326 USA | P: 1.248.393.2000 | 1.800.224.5522 USA | F: 1.248.393.0277 | fluxtrol.com





09182014



# ALPHAFORM *LF*

**Low to Medium Frequency Soft Magnetic Composite** [Frequency Range: 1 – 80 kHz]

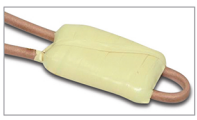

## Instructions for AlphaForm

1. AlphaForm is soft and ductile at room temperature, but can be made even more flexible when heated with a heat gun or oven, not exceeding 140° F or 60° C as it may begin to cure and harden.

2. Place a strip of heavy duty aluminum foil (0.024 mm) along the working edge of the coil. This will provide a flat surface to form the AlphaForm against. Avoid using standard aluminum foil, (0.016 mm) as it may be more difficult to remove after curing. Also, remove all aluminum foil from the AlphaForm after curing.

3. Form the AlphaForm onto the coil and foil surface as desired. The AlphaForm might cool and become less pliable during forming. If it does, reheat the AlphaForm. AlphaForm can be repeatedly reheated, as long as the temperature does not exceed 140° F, or 60° C.

4. Wrap PTFE (polytetrafluoroethylene) thread seal tape around the AlphaForm to hold it tight against the coil. If not held in place, AlphaForm may shift slightly during curing. Use yellow gas line PTFE tape, which is thicker than white PTFE tape.



5. To cure the AlphaForm, place coil in an oven at 250°F (120°C) for one hour. Then increase the temperature to 375°F (190°C) for an additional hour.

6. Remove the PTFE tape from the coil. The bottom layer of PTFE tape will be fused onto the surface of the AlphaForm, but it will not affect the performance of the coil.

7. Remove the aluminum foil from the working surface of the coil. Carefully inspect the coil for any left behind foil fragments and remove them.

8. Put the induction heating coil into service. No machining is needed. However, AlphaForm can be machined or ground into a more desired shape if required.

9. For any additional information or help with your specific induction heating application, please contact Fluxtrol directly.


FLUXTROL *100* | FLUXTROL *A* | FLUXTROL *50* | FERROTRON *559H* | ALPHAFORM *LF*

FLUXTROL Centre for Induction Technology

1388 Atlantic Blvd. | Auburn Hills, MI 48326 USA | P: 1.248.393.2000 | 1.800.224.5522 USA | F: 1.248.393.0277 | fluxtrol.com

© 2015 Fluxtrol, Inc.



08152015