

# Instructions for Using Patented AlphaForm™



Tins of AlphaForm™



MIQ Coil Ready for Concentrator



Warming the AlphaForm™



Cleaning Material from the Bore



Don't Cover the Quench Holes



Finished Coil

AlphaForm™ is the next generation of induction heating magnetic flux field concentrators. It is formed onto the work coil, wrapped, baked in an oven to harden and then used. AlphaForm™ comes in three grades or frequencies of use: LF - low frequency applications from 1 khz to 50khz. MF - medium frequencies applications from 20 khz to 450 khz. HF - high frequency or long duty cycle applications from 450 khz to 2 mhz.

## How Much AlphaForm™ Do I Use?

AlphaForm™ at ¼ inch thick (6.5mm) will carry energy of about 40 kW/SqIn. The amount of AlphaForm™ needed can be calculated based on the area around the work coil to be covered. The amount can also be simulated by forming modeling clay onto the work coil and using the same amount of AlphaForm™.

## How Do I Apply The AlphaForm™?

Warm the AlphaForm™ to about 104 degrees F (40 degrees C) which will make it easier to form. Work on a smooth clean surface. Cut the AlphaForm™ to the desired width with a utility knife. Mold the warmed AlphaForm™ onto the work coil as needed. If the product cools, use a hot air gun to reheat the material. A wooden dowel can be used to square up or even out the shape and edges of the concentrator. A temporary mold can also be used to get the desired edge shape. Remove any excess material prior to curing.

## Why Doesn't The AlphaForm™ Stick To The Coil?

Be sure to clean the oils, paints, coatings or contaminants from the work coil so that a good thermal mechanical bond can be formed between the coil and the AlphaForm™.

## How Do I Cure The AlphaForm™?

Support the coil so that no force is applied to the concentrator. The coil should be baked at 250 degrees F for one hour. Increase the temperature to 375 degrees F and bake for an additional 30 minutes.

## How Do I Keep The AlphaForm™ From Sagging?

To eliminate sagging during the curing process, wrap B-stage tape around the coil securing the AlphaForm™ in place. The tape can be removed after AlphaForm™ is cured.

## What If I Need To Remove The AlphaForm™?

If cured AlphaForm™ needs to be removed, the work coil and concentrator should be heated to 500 degrees F. While it is still hot, a majority of the concentrator can be removed. When it has cooled, further cleaning can be accomplished with a sand or bead blaster.

AlphaForm™ is a trademark of Alpha 1 Induction Service Center, Inc.

**For more information, call 614-253-8900 or visit us at [www.alpha1induction.com](http://www.alpha1induction.com)**

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