

Ask Jon Eakes

# Electric radiant floor heating without electromagnetic radiation!

Last Updated: Sunday, August 19th, 2018, Created: Sunday, May 16th, 2004

In the spring of 2004, a young and dynamic company in Quebec got a new radiant heating cable out of the laboratory and onto the market that has almost no electromagnetic radiation. "FlexTherm" from Longueuil, Quebec came out with what they call their Green Cable.

With a sensitive professional gauss meter, the electromagnetic field proves to be barely discernable. With ordinary, even low amperage heating cables, meters register strong electromagnetic fields as high as three feet off the floor. Choosing the right model of cable and installation technique will allow you to install this over just about any floor structure and under just about any floor finish from tile to engineered wood to rugs. About the only limitation is that electric cables are not good under massive hardwood floors because of both the shrinkage of the wood and the use of nails, which would probably hit the hidden cable.

Finally, a heating manufacturer has dared to face the fact that a growing portion of the population is concerned about electromagnetic fields, even if the medical profession supports the official electrical utility position that electromagnetic fields are not all so dangerous for one's health. I don't know who is right about the health dangers, but I sure do like having a non-ionizing alternative -- like being on the safe side whoever wins the debate. [Click here](#) for details on the health debate around the question of electromagnetic radiation.

How does it work

If you know anything about electricity, the theory behind eliminating the electromagnetic field is rather simple. Old heating cables ran a single heating wire out across the floor and then back to the control box. One wire by itself always creates electromagnetic radiation. Two wires operating at the same frequency but inversed from each other and placed properly side by side will cancel out the field. It took years to learn that it worked best with a twisted pair and to perfect the theory into a reliable working product that is easy to install. But this young team from Quebec dared to do it. If you are looking at a radiant heating cable that does not clearly indicate that it has almost eliminated electromagnetic radiation while keeping heat radiation, it is the old technology. Companies that bother to do this brag about it.

Why don't all cables do this?

Why was it daring to do this? Because no company wants to admit that their standard products could be radically improved. But market demand is king -- and this has become the gold standard in-floor heating cable. In fact, now that it is available, in both 120V and 240 Volt configurations, I wouldn't use any cable that didn't perform at least as well as this "Green Cable". After all, it costs only about 10% more than the standard cable. By the way, if you want to install this yourself, you can, but in many provinces and states you must, and everywhere you should, have the final tests and connections made by a licensed electrician -- just to be safe. After all, this is a powerful heating cable buried in the floor.

**Keywords:**

Floors, Types, Radiant, Wire, Radiation, Hazardous, Electromagnetic Fields, Environmental, Heating, Health, Electrical

