

Re: How to use a hot wire (Kanthal) to cut a plastic bin containing a liquid

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"Charles A. Sherwood" wrote:

- > > *Good piece of information. I have an additional element in my setup;*
- > > *the liquid inside the bin. As the plastic is melted around the wire it*
- >
- > *I think the liquid in the bin will cool the wire and it will stop*
- > *cutting until the liquid leaks out. I have experimented with hot*
- > *wire to cut styrofoam and even the styrofoam will cool the wire.*
- > *Thin sections will cut quickly and thick sections will cut very*
- > *slowly and require more current.*

I think the current will be close to the same, whether the bin is filled or empty--

The voltage will be less, because the wire in the liquid will be cooled and it's

resistance lower---the rest of the wire, however that in the air outside, and within

the molten plastic will still get hot... However, The temperature gradient from air to plastic, to liquid, may be such that you can't melt the plastic before the wire in the air burns out.