



Spirit-filled thermometers

1. **ERTCO:** Red fill is either toluene*, kerosene** or isoamyl benzoate***
Blue fill is either kerosene or isoamyl benzoate
Green fill is kerosene
2. **Sper** (red liquid): is kerosene oil with red dye.
3. **Taylor:** red non-toxic fill is an alcohol based liquid called Permacolor:

*Toluene is a hazardous material- flammable, and a skin, eye and lung irritant. Not carcinogenic

**Kerosene is flammable and a skin, eye and lung irritant.

*** used as a flavoring agent

Re-uniting thermometer fill:

Barnstead/ERTCO recommends a “soft flame” for upper column separations. By this they mean using a small flame on a Bunsen burner very sparingly and very intermittently. If you apply too much heat the fluid will over-fill the expansion chamber and crack the column. Apparently, the over-heated thermometer would not crack with a dangerous explosion. One risk is the loss of Mercury which is toxic. The volume of either toluene or kerosene is so small that a fire risk is minimal.