There is moisture present in both the Acetone and Nitrates, particulary the Strontium Nitrate. These two materials will both draw water from the air if exposed to it. If you live in a humid climate, like Ohio, this can be a real problem.

Water may also be part of the mechanism that allows the Go Getter to work. If a dry Go Getter is broken in half you will notice that the interior of the star is very porous, similar to the surface of a sponge. This network of tiny air pockets is probably due to gasses released when the Magnesium in the comp reacts with residual moisture present in either the Acetone and/or Nitrate. These tiny air bubbles are trapped as the comp thickens and hardens, and have a pronounced effect on the burning speed of this composition. If a pile of dry composition is ignited it will burn with the same vigor of most other star comps. Add Acetone and allow the comp to dry and you have a comp which burns on the edge of exploding. This increased burning rate I feel is a result of the increase in burning surface from the spongelike texture.

This "edge of exploding" is what causes Go Getters to work at times and fail at others. The edge is a very fine line between working and not working. Cross that line and the Go Getters explode, don't reach the line and they don't have any zip. The inconsistency of my results was probably due to the amount of water present and the resulting difference in the burning surface.

Boric Acid buffers the reaction between Water and Magnesium. If the Boric Acid is left out of the mix this reaction increases and the resulting stars explode. This is due to the increase in the reaction and consequently the increase in the number and size of the air pockets.

The curdling I experienced from time to time was not due to differences in chemicals but rather to the amount of moisture present. Water will interfere with the soluability of Parlon in Acetone. If a quantity of Acetone is added to some Parlon in a cup the Parlon will soften into a smooth flowing pearly liquid. Add a drop or two of water to this and the Parlon will clump together, the more water the worse it gets. If Xylene is added to this mixture of Acetone, Parlon and Water the Parlon will dissolve.

If this Water/Magnesium reaction could be controlled it may be possible to achieve more consistency in the Go Getters produced. I am not sure what would happen if this reaction was stopped completely. Would this eliminate all air bubbles, and reduce the burning speed to that of the pile of dry composition, or is there some other mechanism which makes a Go Getter function? Several possibilities exist to reduce or control this reaction.