NEWS · JAN 22, 2025

Go Get 'em Tiger

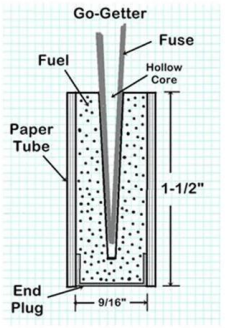


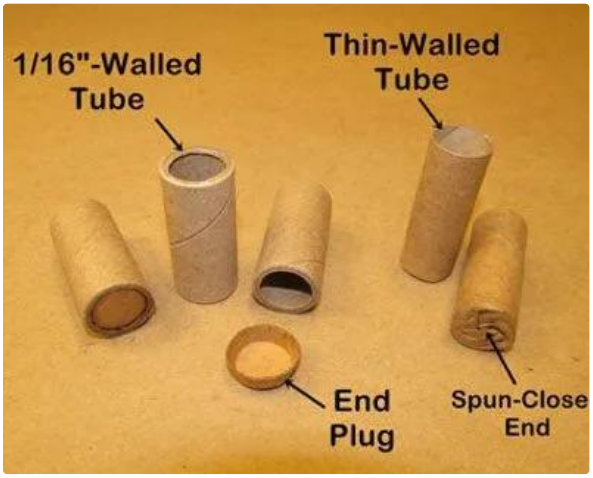
Go Getter fireworks are animated stars used in aerial shells or mines that create an effect similar to swimming or flying all over the sky. They are known for their erratic and unpredictable flight patterns, which make them a crowd favorite. These stars are part rocket and part star, allowing them to fly in wild, zigzag patterns rather than straight lines like traditional stars.

To make Go Getter firework stars, you'll need to mix finely powdered chemicals and add a solvent like acetone to create a slurry with the consistency of pancake batter. This mixture is then poured into tubes, filled to about 80%, and a piece of black match or thermalite is inserted for ignition. The tubes are left to dry for several days, and one end is dipped in a fireproof material like waterglass to prevent the Go Getter from igniting at both ends.

For green Go Getter stars, specific chemicals and their percentages are required, and a detailed recipe with a built-in calculator can be found on the Fireworks Cookbook website. The process involves mixing the chemicals, adding solvent, and pouring the mixture into tubes, similar to the general Go Getter star-making process.

Go Getter fireworks can also be incorporated into various fireworks displays, such as Go Getter shells and rockets, adding an exciting and dynamic element to the show.





The original Dave Johnson magnesium formulas presented in 1989. He credits these as being modifications of Troy Fish color formulas from that era. He also says that the Boric acid is necessary with a magnesium formula to prevent the stars from exploding (he believes due to a moisture reaction between the magesium and the other ingredients in the formula. I have never had any problems with using untreated magnesium either with the composition heating up or exploding rather than jetting, but this may be due to making these always in low humidity environments like Nevada and Arizona.

The formulas for Go Getters are as follows, and are the same as those listed as Nitrate/Magnesium red and green on page #37 of Pyrotechnica VII:

	GREEN	RED	YELLOW
Barium Nitrate	63.0		37.8
Strontium Nitrate		58.0	23.2
Parlon	25.0	29.0	26.6
Magnesium	12.0	13.0	12.4
Red Gum	+3.0	+3.0	+3.0
Boric Acid	+3.0	+3.0	+3.0
Total parts	106.0	106.0	106.0

The yellow is produced by mixing approximately 60 parts green composition with 40 parts red. The color of the yellow can be adjusted by changing these percentages. It is not necessary to premix the red and green compositions. The correct formula can be calculated by the following method. Multiply 40% (0.40) times each of the Nitrate, Parlon and Magnesium in the red formula and 60% (0.60) times the Nitrate, Parlon and Magnesium in the green. When added together they yield the above formula. Since the Boric Acid and Red Gum are additional parts it is not necessary to adjust then, simply add them to the formula.

The Dave Johnson formulas are here to describe what PGI people were thinking at the time regarding go-getters and the perhaps justified concerns about making untreated magnesium color stars in potentially humid environments like the mid-west.

The modern version of go-getter stars deal with this problem by using Magnalium, and look more like normal everyday parlon color stars For example:

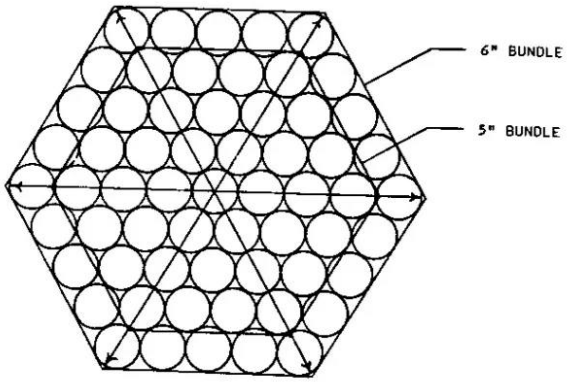
Rebenklau Yellow Go Getter

Potassium Perchlorate	24.7%
Barium Nitrate	34.1%
Red Gum	8.5%
Parlon	16.6%
Calcium Carbonate	6.8%
Magnalium, granular, -200 mesh	9.3%

The question arises what graularity of magnalium to use for good jetting without exploding. 200 mesh Mg/Al is a good place to start and ramp up towards 325 if you want more energetic jetting. Mixtures of 200/325 will achieve the same effect. The Pojete Spanish star formulas are a good place to start for a variety of colors Prior to star comp mixing is the preparation of the GG tubes. These are typically 5/16 "M-80" tubes with the end cap glued in one end only. Rammed fire clay will also work. A hexagon type bundle is created with the prepared M-80 tubes and a rubber band. The Dave Johnson hexagon is described below, though it doesn't need to be this elaborate. Simply create enough of these bundles so if you have more material left overfrom the filling process you can go on and fill the next bundle until the comp is used up. Get the bundle prepared and enough 1- 1/2" pieces of black match cut, so that after the tubes are full the black match pieces can be inserted quickly before the material sets up (1/2 hour?) Once the formula is chosen, the next step is to prepare the star comp in the usual manner and put it into a zip lock bag. Acetone is added to the bag and mixed (kneaded) until the consistency is about like pancake mix. A corner is snipped off at one end of the bag and the material in the zip lock bag is pressed, baker-style into the bundle of prepared tubes. Then its time to insert the black match!

The hexagon is then tightly tied together to form a bundle of tubes which can be handled and moved about.

This process of bundling the tubes in hexagons eliminates the likelihood of knocking the unsteady individual tubes over during filling, and allows the "pour" once started to continue from one tube to the next uninterupted. Once dry the bundles of individual Go Getters can be used whole or broken apart depending on the individual's needs.



For use in shells the longest row (arrows) should contain an odd number of tubes ie. 4" shell 5 tubes, 5" shell 7 tubes, 6" shell 9 tubes etc. for each additional inch add two tubes. This will yield a bundle 1/2" under the finished shell diameter.

Steve Wilson has published a number of formulas for falling leaves that have the possibility of being sped up for the purposes of jetting go getter stars.

As the use of parlon as a binder and chlorine doner was somewhat new in 1989, there was interest in looking at what the manufacturer themselves recommended to use as a solvent. Note that acteone is not considered as a solvent, though it most assuredly does soften the parlon. I used to use some xylene in the mix (20-30 percent) but I believe both Xylene and Tolulene are becoming more difficult to get, especially in California.

UNCATEGORIZED

Read it online

With the videos and comments: https://www.westernpyro.org/blog/go-get-em-tiger