

## FIREWORKS-COLORS EXPLAINED

### FIREWORK -

Firework is a minimal explosive pyrotechnic device that can be used for entertainment purposes.

A Firework also has a fuse that is lit to ignite the gun powder. each star makes one dot in the firework explosion. when the colorants are heated, their atoms absorb energy and then produce light as they lose excess energy. Different chemicals produce different amount of energy creating, different colors.



The following table is an educational guideline for the chemistry of fireworks.

---

Symbol	Name	Fireworks Usage
Al	Aluminum	Aluminum is used to produce silver and white flames and sparks. It is a common component of sparklers.
Ba	Barium	Barium is used to create green colors in fireworks, and it can also help stabilize other volatile elements.
Ca	Calcium	Calcium is used to deepen firework colors. Calcium salts produce orange fireworks.
Cs	Cesium	Cesium compounds help to oxidize firework mixtures. Cesium compounds produce an indigo color in fireworks.
Cu	Copper	Copper produces blue-green colors in fireworks and halides of copper are used to make shades of blue.
Fe	Iron	Iron is used to produce sparks. The heat of the metal determines the color of the sparks.
K	Potassium	Potassium compounds help to oxidize firework mixtures. Potassium nitrate, potassium chlorate, and potassium perchlorate are all important oxidizers. The potassium content can impart a violet-pink color to the sparks.
Li	Lithium	Lithium is a metal that is used to impart a red color to fireworks. Lithium carbonate, in particular, is a common colorant.
Mg	Magnesium	Magnesium burns a very bright white, so it is used to add white sparks or improve the overall brilliance of a firework.
Na	Sodium	Sodium imparts a yellow color to

		fireworks, however, the color is often so bright that it frequently masks less intense colors.
<b>Rb</b>	Rubidium	Rubidium compounds help to oxidize firework mixtures. Rubidium compounds produce violet-red color in fireworks.
<b>Sb</b>	Antimony	Antimony is used to create firework glitter effects
<b>Sr</b>	Strontium	Strontium salts impart a red color to fireworks. Strontium compounds are also important for stabilizing fireworks mixture
<b>Ti</b>	Titanium	Titanium metal can be burned as powder or flakes to produce silver sparks.
<b>Zn</b>	Zinc	Zinc is a bluish white metal that is used to create smoke effects for fireworks and other pyrotechnic devices.