

## Fun Water Absorbing Polymer Crystal Questions and Facts

### What are these crystals?

They are a polymer, which is a long chain of molecules. Their official name is *cross-linked potassium polyacrylamide copolymer gel*. They can soak up to 300 times their weight in water and have been determined to be non-toxic and non-hazardous. These crystals are mostly used in the agriculture business by farmers and gardeners. Another form of this polymer is used in baby diapers due to its ability to absorb lots of liquid.



### How long will they last?

The crystals will stay hydrated if they are kept in a sealed container. They will continue to 'mix' colors and the rainbow will eventually be brownish. If you just mix two primary colors in the container and seal it, the crystals will remain the secondary color once they are totally mixed.

### Could I put them in my yard?

Gardeners originally used these crystals to reduce the need for watering their plants. Since the crystals absorb so much water and release it slowly over time, they are effective in reducing the amount of water needed for a plant to grow by 50 - 75%. They are commonly used in golf courses and other areas that require lots of watering.

### What would happen if I put them in my houseplants?

They can be mixed in your houseplants' soil to reduce the need to water. Be sure to hydrate them before mixing them into your houseplant soil, otherwise when you water your plant and the crystals expand they will push your plant out of the pot. (This would be a good practical joke, but for someone else!) For outside flower beds, you can just mix some into the soil around your plants.

### What happens if they dry out? Can I reuse them?

Dehydrating the crystals is another activity for your child, lay some out on a flat surface and observe what happens. After a couple of days they will be dehydrated back to their original size. At that time, you can rehydrate them by placing them in water. This process can be repeated over and over.

### Can I color them once they are hydrated?

NO, the only way to color them is by using colored water to hydrate them.

### What else can I do with the clear crystals?

The clear crystals are a great way to allow children to see the roots of a plant. Take a small plant out of its soil, carefully rinse off its roots and place it into a clear cup filled with clear hydrated crystals. Add a little water until you can see the roots clearly. It will live in the crystals for a couple of weeks before running out of nutrients. Using the clear crystals, you can also sprout seeds in a clear cup and observe the whole process.

## Fun Color Questions and Facts:

### What are the primary colors?

Red, blue and yellow

### What are the secondary colors?

Orange, purple and green

### What are the complementary colors?

Purple/yellow, blue/orange, red/green These two colors are in contrast to one another and appear brighter when together. If these pairs of colors are mixed they dull each other.

### What are warm colors? Cool colors? Neutral colors?

The warm colors (think of the sun) are red, orange and yellow. The cool colors (think of the ocean) are green, blue and purple. The neutral colors are black, white and gray.

### What type of color is brown?

It is called a tertiary color - the combination of all 3 primary colors.

### What is it called when white is added to a color?

It is called a tint, when black is added, it is called a shade.

