

Bouncy Glue

(Try this at home--with an adult!)

SAFETY information:

- Never put borax or glue near your eyes or mouth.
- Always wash your hands after making and playing with Bouncy Glue.
- Keep Bouncy Glue away from small children, pets, furniture, clothing, and rugs.
- Be careful with food coloring because it will stain your hands and clothing.
- Discard any liquids down the sink with running water. Throw empty bag into the trash.

Supplies:

- | | |
|-----------------------------------|---------------------------|
| plastic sandwich bag with zip top | borax (laundry booster) |
| warm water | food coloring (optional*) |
| white glue* | paper towel |
- *or use colored glue instead of food coloring

Directions:

1. Put ½ teaspoon of borax into the plastic bag.
2. Put about 4 teaspoons of warm water into the bag.
3. Optional - Add one drop of food coloring into the bag.
4. Hold the bag on top and swish the borax in the water until it mostly dissolves.
5. Work with a partner to hold the bag, and pour a really good squirt of glue into the liquid in the bag.
6. Zip the bag tight, and mix the glue and borax thoroughly with your fingers. Knead it for about two minutes or until all of the glue is mixed with the borax.
7. Take the Bouncy Glue out with your fingers and squeeze it in your hand.
Note: -If it is gritty from the borax, rinse it with warm water.
-If it oozes glue, blot the glue on a paper towel to remove it.
8. Form Bouncy Glue into a ball and do “Things to try with Bouncy Glue” below.
9. Store Bouncy Glue in a zip top plastic bag. If you notice that it starts to smell funny, or has black mold growing in it, then it’s time to throw it in the trash!

Things to try with Bouncy Glue:

When the Bouncy Glue is dry, you can bounce it and stretch it. If you pull it very slowly, it will stretch. If you pull it too quickly, it will snap apart, and you won’t be able to put it back together. Try leaving the pieces mashed together in a clean plastic bag overnight.

What's happening?

Glue is made up of individual chains of a polymer (many units) dissolved in water. The mixture of glue and borax produces a rigid polymer because the borax links the chains together. Bouncy Glue is not a liquid or a solid. Scientists call it a “non-Newtonian liquid”.

Also try making these “non-Newtonian liquids” at home:

-For a slime-type polymer, mix glue and liquid laundry starch.

or

-Mix corn starch with a little bit of water until it becomes shiny and flows. Touch it lightly, and it looks like a liquid. Press it hard, and it acts like a solid.