

Conceptos Plasticos and Dow Chemical collaborate on innovative new plastic bricks

What if Legos were real?

What if instead of that toy house you built when you were a kid, you could build a REAL house out of plastic bricks. A good house. And to make it even better those plastic bricks would be made from recycled plastic. The magic here is a novel molecule in the mix called a compatibilizer. They take part of one polymer and put specific groups of atoms on the molecule to make it attract another type of polymer. That way you can recycle mixed plastic waste without having to separate and purify everything.

Conceptos Plasticos is the Colombian company that came up with the idea and makes the bricks. As co-founder, Oscar Mendez, explains, “We can use plastics that not everyone recycles or hard-to-dispose plastic....the bricks are twice as strong as conventional materials, can stand up to an earthquake and...it is completely waterproof... in places that flood.”

The houses are sturdy, thanks to the strong, durable plastic bricks. The houses are naturally cool, which is good for hot climates in Latin America and Africa, where the first houses are being built. The houses are inexpensive and easy to build in part because the bricks snap together. Four people can build one in five days and for 30 percent less than the cost of a typical house.

Dow Chemical is partnering with Conceptos Plasticos to find ways to give the plastics it makes, including hard-to-recycle plastics like potato chip bags, a new life rather than sending them to landfills.

Dow is also collaborating on another project, using the same type of plastic bricks to build schools. New classrooms are already open for learning, in Colombia and across the Atlantic in the Ivory Coast, where the plan is to build more than 500 classrooms.

Dow's chemical know-how adds a second contribution to the project as well. Dow makes another material, called a “compatibilizer” that helps different plastics mix and stay together better, which makes for a better plastic brick.

Of course, any reuse of plastics is good news. But because schools are bigger than houses, the amount of recycled plastic put back to work is bigger too – four metric TONS per school, which makes this good news, even better.

And these days, houses aren't the only things we're making from recycled plastic. In fact, you could drive home to your new recycled plastic house, on a [street paved with recycled plastic!](#)

You could even get a [nice set of kitchen chairs](#) for your new plastic house, made from recycled soda bottles – think PET (polyester) made from xylene. So maybe someday in the future, one of your empty bottles, might end up right back in your kitchen. And whatever kitchen it turns up in, it's good to know that together, companies and consumers are finding productive ways to keep plastic out of the trash, and turn something old into something useful.