

Flame repellent furniture manufactured from recycled materials

October 21 2013



Fires in urban zones and public transportation are common because flammable material is used in its manufacture; in order to reduce this problematic, the Center for Applied Innovation and Competitive Technologies (CIATEC) has obtained materials from recycled polyolefins (thermoplastics) that have flame retardant properties, which can be employed in everyday items as furniture or beams.

Polyolefins are found in a great part of the residue from the [plastics industry](#); with this materials CIATEC proposes to elaborate roof beams or hoses that conduct electric wiring. The advantage is that this material have fireproof properties.

The research titled "Process for obtaining recycled materials with flame retardant properties" was carried out by Guadalupe Sánchez Olivares from CIATEC in central Mexico. The [project](#) is finished and ready for its technological transference.

"We have given additional value to several waste object that come from the plastics industry and pollute the environment: the fireproof property gives them different uses and applications so it can be used as a safe material. We are going to contribute in the discharge of environmental pollutants on a national level; the point of the project is to give added value to residue thrown in the garbage and open up a market for it".

The researcher at CIATEC added that the obtained results are satisfying concerning mechanical and fireproof properties. The research has already been concluded and is ready for technological transfer to the industries that require it, or to manufacture recycled products with fire retardant properties.

"We are in negotiations with a company that is going to build subway tracks in Mexico City; our proposal of fireproof material interested them because, by using them, risks can be avoided".

Sánchez Olivares said that the material complies with fireproof properties, though it has to be evaluated to fulfill the established norms in beams, hoses and railroad ties, and verify the requirements in use and specific applications.

Currently, the fire retardant polymers are imported to the country, thus

the project aims to lay the technological foundations in Mexico to produce recycled materials with these properties using national technology.

The material developed at CIATEC will serve in the manufacture of hoses, pallets, furniture, roofs and other articles employed in interior design.

The project "Process for obtaining [recycled materials](#) with flame retardant properties" began at CIATEC, after receiving funding from the Joint Fund between the National Council for Science and Technology (Conacyt) and the Government of the state of Guanajuato, and is in the process of obtaining patent.

Provided by Investigación y Desarrollo

Citation: Flame repellent furniture manufactured from recycled materials (2013, October 21) retrieved 3 May 2024 from

<https://phys.org/news/2013-10-flame-repellent-furniture-recycled-materials.html>

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