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PROSPECTS OF USE OF «RPET» MATERIAL IN QUALITY OF RAW MATERIALS FOR 3D PRINTING

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Today, each of us has come across clothes, bags, backpacks with the indication of the material «rPET» in the product description. And more and more brands are using this material to make their various products. For example, National Geographic uses «rPET» in their lines of backpacks and bags. In one case, it is related to environmental protection, in the other - to material processing [1] .

«rPET» is an abbreviation from English recycled polyethylene terephthalate, which in translation means «processed polyethylene terephthalate».

Polyethylene terephthalate is one of the most popular types of plastic in the world. It is used in many areas, but mostly for the production of plastic bottles and containers. If you look at the bottom of an ordinary plastic water bottle, you can see a label that means the product is 100% recyclable. And «rPET» is the result of such a process.

The technology of processing such containers into finished products is offered, which includes: collection of PET garbage; sorting, cleaning and grinding on flexo; processing flexi in a 3D printer extruder; obtaining finished products or parts by FDM printing.

When creating a model of a product for 3D printing using solid-state modeling programs, you can foresee marking it, which will indicate that it is made of recycled material. This does not affect the properties and quality of the product, but there are significant differences from the point of view of environmental friendliness, namely: new resources of the Earth are not used for production; manufacturing from recycled plastic is more economical in terms of energy consumption; reducing emissions of CO_2 into the atmosphereand reducing the amount of garbage in landfills.

References

1. What is rPET ? [Electronic resource] - Access mode: https://bagston.ua/shcho-take-rpet/.