

ON OBTAINING COMPOSITE FABRICS AND PRODUCTS

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ABSTRACT

There are described the possibilities of creating unconventional materials, targeted functional paintings, and value-added products through the use of basalt raw materials in this article. The chemical composition of basalt is mainly: SiO₂ - 45-60%, Al₂O₃ - 12-19%, Fe₂O₃ and FeO - 5-15%, SaO - 6-12% MgO - 3-7%, TiO₂ - 0.9-2%, Na₂O and K₂O - 2.5-6% and other compounds -2-3.5%. The strength of basalt fiber, in accordance with the existing dimensions of the diameter of elementary fibers: 5.0 microns - 215 kg / mm²; 6.0 microns - 210 kg / mm²; 8.0 microns - 208 kg / mm²; 9.0 microns - 214 kg / mm²; 11.0 microns - 205 kg / mm². Basalt fabrics and products have high strength, non-flammable and flammable, maintain their integrity up to +980 ° C, are resistant to electromagnetic radiation, moisture, corrosion, resistant to chemical influences (acidic, alkaline media and salts) and have electrical insulating properties . The article is devoted to the prospects for creating functionally oriented products, innovative composite materials aimed at localizing and creating additional value and research on the use of basalt.

KEYWORDS: *Basalt, Basalt Fiber, Roving, Cord, Twisted Reinforced Roving, Woven, Bedding, Knitwear, Sleeve, Composite.*

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