

ANALYSIS OF THE COMPOSITIONAL STRUCTURE OF POLYVINYL CHLORIDE AND BASALT COMPOSITION

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Abstract

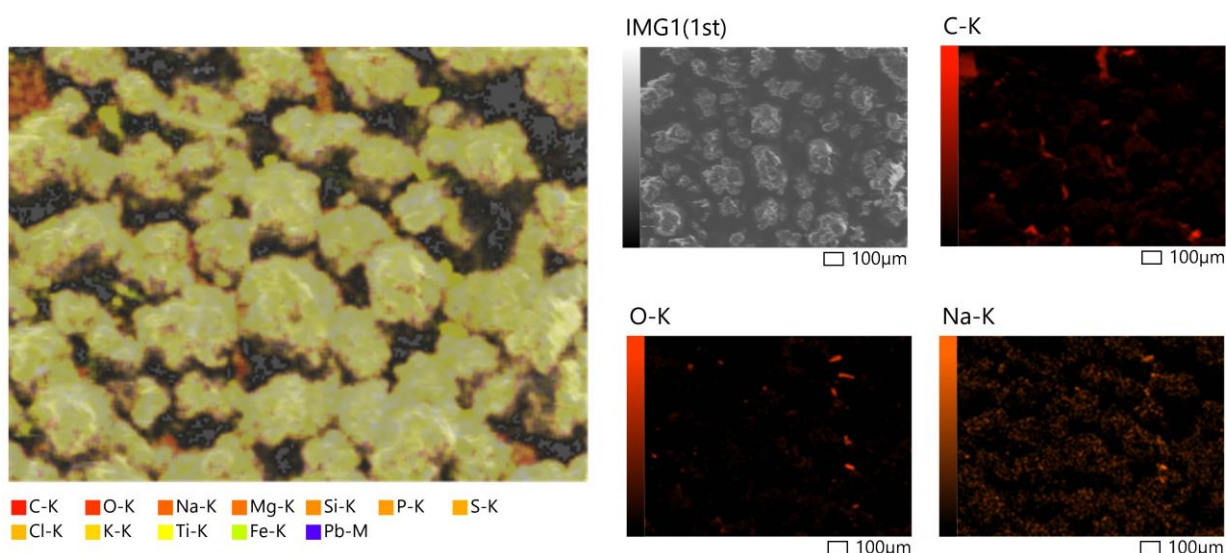
As the development of today's industrial development in the world increases, so does the demand for opening opportunities, and the most important demand is increasing. As the natural resources are decreasing year by year, it is an important task to find large-scale products that can replace them. The volume of production of polymer composite materials, which make up many industrial enterprises and are part of their production products, is increasing day by day. Therefore, the localization of the most basic components in the production of polymer products, i.e. fillers, thermostabilizers and plasticizers, is of great importance. Substitution of raw materials with lower prices leads to economic gains as well as significant changes in terms of quality.

Key words: basalt, filler, polyvinyl chloride, modification, gossypol resin, mixing, technological parameters.

Basalt is an extrusive igneous or volcanic rock that has a low silica content, dark in colour, and is very rich in iron and magnesium. Basalt rock is mainly composed of pyroxene, olivine, and plagioclase and is the most common rock on the earth's surface. The texture of basalt rocks is coarsely porous as those holes are left by gas bubbles. The specimens of these rocks are mostly fine-grained, glassy and compact. A large part of the ocean floors is made from basalt rocks. When erupted by volcanoes in ocean basins, it can lead to the formation of volcanic Islands. Basalt rocks have also built up huge plateaus on the surface of the land. Maria, the dark plains on the Moon and also volcanoes of Mars and Venus are known to be possibly made up of basalt. A basalt dark in colour can be called the dark basalt. We find its applications in textile industries, fire protection. From these places, we get a clear idea that understanding basalt use is really important for us. In this article, we will understand what basalt is, the use of basalt, basalt type, and more about this in detail. Basalt Basalt is an igneous rock that is formed from the quick cooling of lava rich in magnesium and iron when exposed at or very near the surface of a terrestrial planet or the moon. (Image will be Uploaded soon) Point to Note We must note that more than 90% of all volcanic rock on Earth is basalt, and the eruption/bursting of basalt lava is seen by geologists at around twenty volcanoes every year. Basalt is also a crucial volcanic rock type on other planetary bodies in the Solar System. For example, the lunar maria are plains of flood basaltic lava flow and basalt is a common rock existing on the surface of Mars. Basalt

Formation Basalt rocks are usually formed when the volcanic basaltic Lava rapidly cools from the deep interior of the earth's crust equivalent to plutonic gabbro-norite magma and gets exposed to the Earth surface. Gas cavities are absent in the basalt lows and these floors are generally quite thick and extensive.

Basalt is now being added to the polymer composite materials component based on the results of new scientific research. Based on this, we can obtain materials for many types of technical purposes, added as a filler for polyvinyl chloride. To obtain a composite material from polymers, only the filler is not enough, that is, it is necessary to add thermostabilizers, plasticizers, colors to the composition of the polymer. These compounds do not interact chemically, but small particles form a common physical bond with each other. A scanning electron microscope image showing the constituents and dimensions of a basalt-doped polymer composite is presented.



The main visible elements in the image are S, Si, O, Fe, Mg, K, Pb, Cl. 4 of the photos are colored and one is colorless. In images magnified up to 200 and 500 times, we can extract each element from the image according to its color.

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