

# Quality Construction Of Asphalt Concrete Square Using Foreign Technologies.

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**Annotation:** In order to ensure the quality of construction in the construction of roads in the Republic of Uzbekistan, we are talking about the use of geotextiles and increase the efficiency of road surfaces.

**Keywords:** Construction, composite, road, geotextile, geosynthetic, material, construction, coating, asphalt, deformation, lifting, erosion, crack, elastic, QSHA, foundation.

**Introduction.** Asphalt is a material made from a mixture of crushed stone (gravel), natural or crushed sand, mineral powder and bitumen in certain proportions. The materials that make up the asphalt concrete mix are mixed in special devices when heated. Depending on the type of stone materials used as large aggregates in asphalt concrete, gravel can be rocky, gravelly and sandy. Coatings made of hot and warm asphalt concrete mix are characterized by faster formation, strength and serviceability even in the compacted state. Cold asphalt concrete pavements are slippery in rainy weather, so they usually require additional surface treatment. Hot and warm asphalt concretes can be large grains up to 40 mm, medium grains up to 20 mm, and grains up to 15 (10) mm, depending on the size of the gravel, while cold asphalt concrete can be only fine-grained or sandy. Prior to laying and compacting the asphalt concrete, the surface of the foundation must be properly prepared. After patching, leveling and cleaning the surface of the substrate should be dried naturally with sand heated to 200-250 °C or with special dryers (heaters). Once the foundation is dry, it is treated with bitumen materials. To do this, the bitumen emulsion must be heated to working temperature or diluted with paraffin. BND 90/130 and BND 60 / (90) viscous bitumen, as well as SG 70/130 liquid bitumen are used. Emulsion or liquid bitumen is poured 3-5 hours before laying the mixture. A thin layer of bitumen is diluted to the appropriate level (8-12% by weight) with paraffin to facilitate even distribution. Asphalt concrete mixture is laid on the built surface after processing. If it is laid on a freshly distributed bitumen emulsion, the mixture will not adhere to the base [1].

**Methodology:** Waterproof non-woven, woven and composite materials intended for use in building structures are called geotextiles.

The use of geosynthetic materials in road construction is growing, as is the construction of new roads and the use of geosynthetic materials in road construction.

Road surface (asphalt, concrete) can be thought of as a unique multi-layered structure. It is known that the strongest material is chosen as a basis for this construction. In the modern method of road construction, geotextile serves as such a material. Geotextiles have been used in road construction to increase the erosion resistance of road surfaces. Geotextile is a high-strength fabric, full of air and easily permeable to water. Geotextiles are widely used in road and hydraulic structures, transport and engineering communications [2].



Figure 1. QSHA shedding.

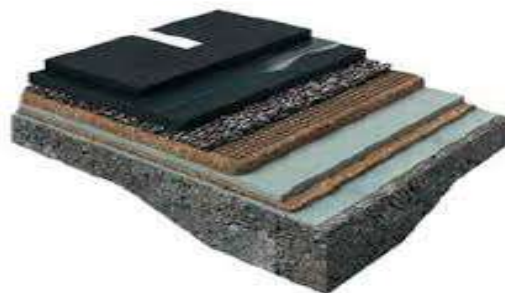


Figure 2. Laying the coating in layers.

Geotextiles prevent uneven penetration of the woven material into the ground during construction. This reduces the consumption of building materials. Geotextile fabric forms a reinforcing layer on round soils with a load-bearing surface. The material resists deformation of the pavement and erosion of the slopes [3].

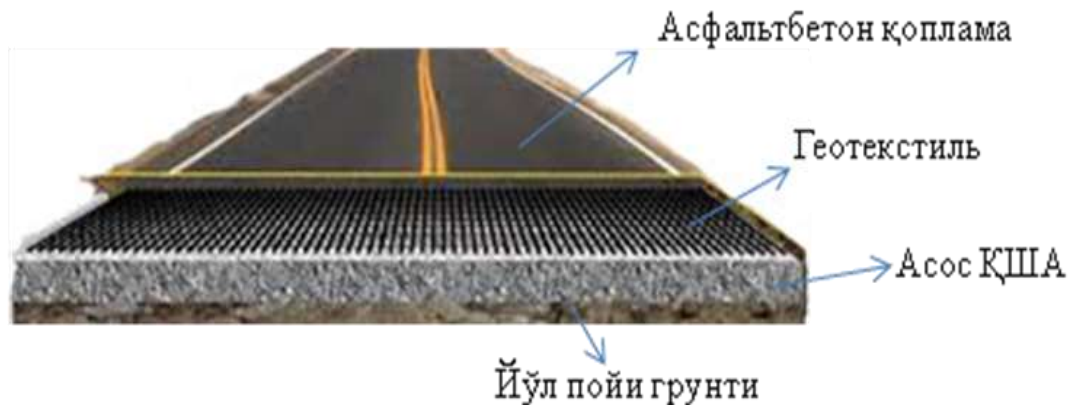


Figure 3. Location of geotextile material.

**Analysis and results:**

1. Reinforcement and reinforcement of lifts and slopes;
2. Erosion protection and prevention of crossing of the road surface by external layers;
3. Soil filtration, slowing down the ingress of soil particles into the drain;
4. Soil drainage and accelerating water runoff;
5. Waterproofing - to prevent water from entering the working layer of the soil;
6. Geotextile performs these functions at an excellent level due to the combination of the following features;
7. Due to the high modulus of elasticity, the material can accept large loads and perform the function of reinforcement in relatively small deformations;
8. Significant elongation at the occurrence of cracks (up to 45% of the strength of the material), ie local damage does not lead to the collapse of the material and it continues to perform its function;
9. High resistance to cracking and abrasion, which is especially important when laying the coating.

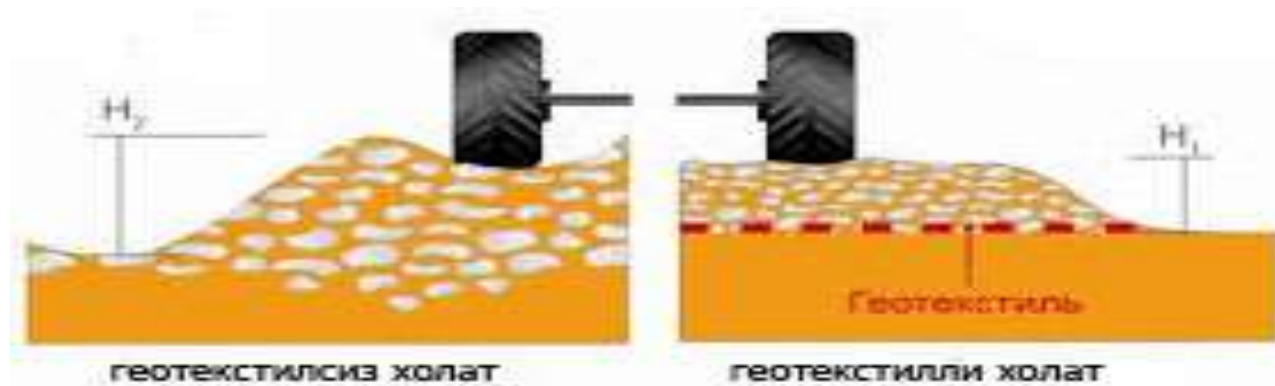


Figure 4. View of geotextile cases.

**Discussions:**

- Reliability of road structures and increase their service life,
- Reduction of time between road repairs,
- Reducing the thickness of the pavement, as well as the cost of construction of road structures,
- High construction efficiency in difficult conditions
- Long-term guarantee of road pavement quality.

**Conclusions.** The material retains the top layer of surface soils and prevents deformation of the local landscape and subsidence of the foundation for construction. The cost-effectiveness of geosynthetic materials can be achieved by reducing construction costs, increasing the service life of structures, and providing a short-term increase in the maximum allowable loads on structural layers made of geosynthetic materials.

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