

Diorite presentation

Diorite (*Fr. Diorite, Gr. Diorízo I choose*) is grey-greenish, transitional, fully crystalline, igneous, intrusive rock of medium acidity. It is widespread and occurs in areas of granitoid intrusions. Sometimes it forms a stock, dike, or laccolith. There are diorite deposits in Great Britain, Italy, Germany, Finland, Sweden, Romania, Turkey, Egypt, New Zealand, the USA. Diorite is also found in Georgia.

Our diorite deposit was discovered in the highlands of Adjara.

In the municipality of Khulo, near the village of Kurtskhli, there is a rock massif called Kildeshamfour, which is 5-6 million years old.

The stone is gray. It contains feldspar, which is why it has a greenish cast.

The mineral content of diorite found in Adjara by X-ray fluorescence is as follows:

1. **SiO₂ – 47.21%**
2. **Al₂O₃ -15.37%**
3. **Fe₂O₃+FeO -10.30%**
4. **TiO₂ - 1.29%**
5. **MnO – 0.22%**
6. **MgO – 5.45%**
7. **CaO – 9.05%**
8. **K₂O – 1.21%**
9. **Na₂O – 5.21%**

The diorite contains:

Plagioclase, hornblende, pyroxene, biotite, quartz, amphibole. The breed is of medium acidity. It is completely crystalline, unevenly granular. Prismatic crystals of plagioclase predominate; grains of pyroxene and amphibole of various sizes are also present.

Physico-mechanical characteristics of the Kildeshamfoury diorite:

1. Skeletal density - **2.66g/cm³**
2. Mineral particle (density) - **2.74 g/cm³ P**
3. Volumetric weight (density)- **2.67r/ cm³ P**
4. Water absorption capacity -**0.24 W%**
5. Water saturation coefficient -**0.70K**
6. Porosity - **2.9 N%**
7. Ultimate strength under uniaxial bending in a dry state - 1180kg/cm²R - natural.
8. Strength factor - 9,71f The rock belongs to the third category of hard rocks (dense).
9. According to Rc (with water), the rock is strong (Rc-1200-500 kg. /cm²)
10. In terms of wear (Ke -0.009), the rock is very durable
11. Frost resistance – frost-resistant.