58460 Soapstone, steatite

Chemical composition : vulgo talc or steatite Mg3[(OH)2|Si4O10]

Soapstone is the solidified form of talc. The name was chosen because the material feels greasy. It usually contains serpentine, a metamorphic rock that was originally basic. Common accompanying minerals are kaolin and granite.

Soapstone may contain asbestos. Even if suppliers prove with an analysis that the currently delivered product is asbestos-free, an asbestos contamination cannot be excluded beyond doubt because of the often unsuitable analysis method.

The following limiting compositions are given for a typical steatite mass: 60-85% talc, 5-17% clay, 0-17% magnesium carbonate, 0-24% barium carbonate, 0-2% lime and 0-2% beryllium oxide.

Other names for soapstone are:
- Steatite
- potstone or effigy stone
- soapstone
- Spanish, Venetian or Briançon chalk
- lavez, gilt or kiln stone
- pierre ollaire or pietra ollare, - depending on the origin and nature of the stone.

Origin and formation

In the course of the formation of a mountain range, two lithospheric (lithosphere = earth's crust, the rocky shell of the earth reaching down to a depth of 120 km) masses collide. In the process, parts of the deep rock are transported in the earth's crust. Due to the contact with granites and gases enriched with CO2 and H2O, they partially turn into soapstone.

Properties

Soapstone is a dense variety of the softest rock, talc. This has the hardness 1, soapstone the hardness 1,5 - 2 on the Mohs` hardness scale of minerals. Both can be scratched with a fingernail. Chinese soapstone is slightly harder (hardness 2-3). (Diamond, hardness 10). Soapstone is greasy, soapy to the touch. Its color varies from whitish, greenish, reddish, yellowish, grayish etc.

Depending on where it is found, it may have asbestos, chlorite and/or mica content.

Kremer Pigmente GmbH & Co. KG · Hauptstr. 41-47 · DE-88317 Aichstetten ·Tel. 0049 7565 914480 · info@kremer-pigmente.com · www.kremer-pigmente.com

Use

Soapstone was and is used in many ways: for drawing on fabrics (tailor's chalk), for polishing serpentine, marble, glass and metal mirrors, as a lubricant and sealant, for removing grease stains, and also for make-up. Because of its resistance to fire and acids, it is used in the manufacture of crucibles, acid-proof vessels, cooking pots, glass burners, and as a furnace-building material, etc. For the Eskimos, tran lamps made of soapstone provide brightness and warmth. The soft, soapy soapstone has always fascinated man. This is proven by finds up to 5000 years old, which have been made around the world. Cultic and artistic objects such as jewelry, grave goods, figurines, utilitarian objects such as rolling seals, make-up vessels, casting molds, oil lamps, cups, pans, stoves were created.

Soapstone is a "monoclinic-prismatic" mineral. It can be worked very easily, therefore it is used to form sculptures. In Switzerland, soapstone has less tradition as a creative material. One finds handicraft decorated articles of daily use, or ecclesiastical jewelry in the areas where the material is native.

It is mined in all parts of the world, but not all types have the same quality: The Nordic soapstone is hard and is processed into river floors, wall panels, tiled stoves and utensils. European soapstone is brittle, is ground and mixed with ceramics to make insulating material and is used in the production of medicines. For sculptural design, the softer stone from the more southern earth belt, for example from China and Thailand, Australia and Africa, is best suited.

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