**TALC ROCK**

Most people use products made from talc every day; however, they don't realize that talc is in the product or the special role that it plays Talc is a hydrous magnesium silicate [mineral](https://geology.com/minerals/what-is-a-mineral.shtml) with a chemical composition of Mg3Si4O10 (OH) 2.it is usually green, white, gray, brown, or colorless. It is a translucent mineral with a pearly luster. It is the softest known mineral and is assigned a hardness of 1 on the [Mohs Hardness scale](https://geology.com/minerals/mohs-hardness-scale.shtml). Talc occurred in talc-rich schists or steatite through hydrothermal alteration of mafic rocks (steatitization) subsequent to serpentinization during green schist facies metamorphism. Also formed by thermal low-temperature metamorphism of siliceous dolostones.

**TALC ROCK IN EGYPT**

Many of talc deposits in the Eastern Desert of Egypt such as Atshan, Abu Gurdi, Darhib, w. kharouf , w. alaky and Kashira

* **Application**
1. In the manufacturing of plastics.
2. In the manufacturing of ceramics products such as bathroom fixtures, ceramic tile, pottery, and dinnerware.
3. As an extender and filler in paints.
4. As a mineral filler to improve the opacity, brightness, and whiteness of the paper.
5. As the powder base of many cosmetic products.
6. Roofing materials to improve their weather resistance.
7. In a wide variety of dimension stone and sculpture applications.
8. As a lubricant in applications where high temperatures are involved.
9. As a carrier for insecticides and fungicides.
10. Reduces wear on application equipment.
11. In rubber industry.
* **Specifications**
* **Physical Properties**
* **Mohs Hardness: 1**
* **Specific Gravity 2.7 to 2.8**
* **Brightness : 83 – 92 %**
* **Diaphaneity: Translucent**
* **Cleavage: Perfect on [001].**
* **Tenacity: Sectile; Flexible but not elastic**
* **Optical Properties:**
* **Translucent. Color: Light to dark green, brown, white; colorless in thin section.**
* **Streak: White.**
* **Luster: Pearly, greasy, and dull.**
* **Optical Class: Biaxial (-).**
* **Chemical composition**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| OXIDE | SiO2 | MgO | Al2O3 | CaO | Fe2O3 | P2O5 | Na2O | K2O | L.O. I |
| GRADE |
| GRADE (1) | 56.00 – 58.00 | 31.00 – 32.00 | 0.30 – 0.50 | 0.30 – 0.50 | 0.10 - 0.20 | 0.01 – 0.02 | < 0.01 | < 0.01 | 4.50 – 5.00 |
| GRADE (2) | 58.00 – 59.00 | 29.00 – 30.95 | 0.60 – 1.50 | 0.60 - 1.20 | 0.10 - 0.20 | 0.01 – 0.02 | < 0.01 | < 0.01 | 5.00 -6.00 |
| GRADE (3) | 59.00 -61.00 | 26.00 – 28.95 | 1.50 – 2.50 | 1.20– 2.50 | 0.10 - 0.20 | 0.01 – 0.02 | < 0.01 | < 0.01 | 6.00 - 7.00 |



