

Talc Grinding Systems

Applications and Properties

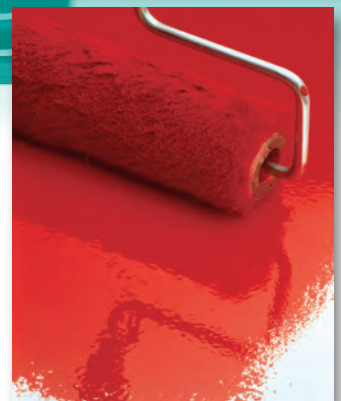
Talc is known as the softest mineral on earth. As a natural ore it is always found in combination with other minerals such as dolomite, magnesite or very often chlorite. Most talcs are white, lamellar, chemically inert, non-toxic, insoluble in water but with an affinity for organic chemicals. The benefits of talc vary according to the application. It acts as an anti-sticking agent, an anti-caking agent, a lubricant, a carrier, a thickener, a re-inforcing filler and an adsorbent.

Talc is used as

- filler in paints, plastics, paper, rubber, adhesives, jointing compounds, stucco
- oil and grease absorber in paints, cosmetics and pharmaceuticals
- pitch control in pulp and paper
- dusting and mold release agent in rubber and pharmaceuticals
- anti-caking agent in fertilizers and animal feed
- carrier of insecticides
- insulator in electrical applications
- fragrance retainer in body powders
- fire retardant in roofing products like tar paper, asphalt shingles and roll roofing
- lubricant in pharmaceuticals
- extender to improve hiding power and TiO_2 efficiency in paints
- UV-resistant component to replace TiO_2
- re-inforcing agent for higher stiffness and improved dimensional stability in polypropylene plastic
- flux enabling ceramic tile firing temperatures and cycles to be reduced



PITCH CONTROL



BRUSHABILITY



SILKINESS

NEA Benefits

- Experience** ■ since 1942 in talc grinding
- Fineness** ■ typical fineness for fine grinding is 1% > $32\mu m = 425$ mesh
- highest classifying performance with sharp top cuts by SDR Radial Classifier
 - five pendulums to achieve finest grinds in Pendulum Roller Mill
- Hard Running** thin material bed in grinding zone causes hardest grinding operation leading to cracks and damages in pendulum mills of standard design
- upper mill housing with vibration isolator
 - lower mill housing in one-piece cast design
 - mill foundation using spring dampers
 - rotor assembly in reinforced talc design
 - critical mill parts made of high quality steel



ANTI-AGING

Many thanks to RIO TINTO for providing us with these pictures.

