



STEEL, POLYESTER ADHESION



ADVANCED TECHNOLOGY, WIDE MINERAL BASE

Pure, very fine kaolinite based silicate Minimised content of quartz No metal impurities contamination (iron, lead)

Vulcolin OT76M Standard

Vulcolin BC Fine milled

Vulcolin 15AP Ultra fine milled

VULCOLIN 15AP



Description:

layered silicate mineral, min. 93% kaolinite, very low abrasiveness, high plasticity

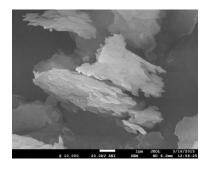
 X_{50} : 1,5µm (Laser graph method),

BET: 22-24m²/g

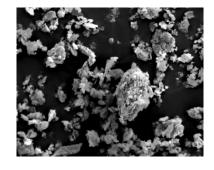
Application:

rubberizing compounds

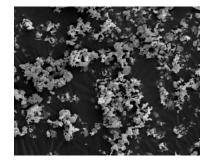
- steel cord
- steel wire



Standard milled

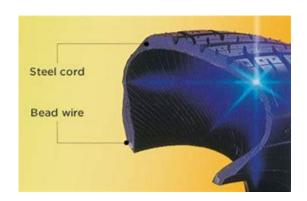


Ultra fine milled

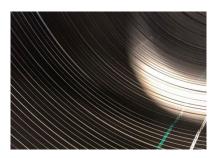


IMPROVE RUBBERIZING & REDUCE SCRAP





- steel "green" coating stability
- wire & steel cord separations





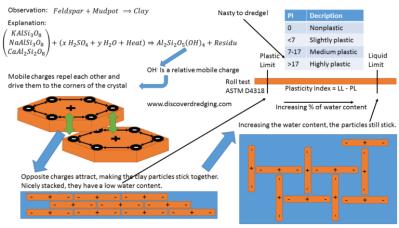
PFEFFERKORN'S PLASTICITY INDEX

MOLD FOULING describes the negative influence of some silicate fillers in the production

Some of the white fillers filled compounds tent to stick strongly to the mold/die metal surface

"The plasticity in the processing of ceramic materials is a fundamental property since it defines the necessary technical parameters to convert a particulate ceramic body to a component with a given shape by application of pressure."





Metal sticking tendency is directly related to the PLASTICITY of the filler and can be used in the opposite way to improve the green tack of rubberising compounds to steel. There is a high physical attraction between clay plates and smooth metal surface and also between clay plates itself. Delaminated, originally layered silicates rebuild their structure in the process, under pressure the silicates create a highly orientated layer. The steel adhesion force grows with pressure and perfect dispersion of the filler.

High plasticity clay increase the green adhesion and coating stability of rubberizing compounds for steel cord & steel wire



Silicate (clay) requirements:

Plasticity index min. 40 (PFEFFERKORN PLASTICITY INDEX) Purity approx. 95% of Kaolinite (round shape particles below 2%) Ultra fine milling; X50 close to $1\mu m$

Formulation:

40 - 60 phr, partly replace of carbon black, viscosity has to be adapted Suitable mixing process (dispersion)
Replacement/Reduction of tack resins

Rubberizing:

Dry and smooth surface of rubberized metal Thin, controlled layer of compound High pressure in rubberizing process

