

COLTOYS- MIXTURE COMPOSITION DESCRIPTION

The compound used in the manufacture of pet toys is mainly made up (82%) of high quality natural rubber, that is, the natural rubber used corresponds to the specification TSR-L (technically specified rubber grade L- Cis Poliisoprene) ; this guarantees a high purity in the used rubber

The other ingredients used, are constituted by:

- **Fillers:** the main one used is plant based silicon dioxide (silica); which, as is known, is highly reinforcing, which is reflected in the high mechanical and dynamic properties of the final product. Additionally, an ultrafine calcium carbonate (10PHR) is used in small proportions.
- **Protection agents:** The protection agents used in this compound are a non-staining Antioxidant and an Antiozonant; this with the purpose of obtaining a good resistance to aging of vulcanized products, especially with regard to degradation by temperature, oxygen and ozone
- **Vulcanizing agents:** The vulcanizing agent is responsible for crosslinking in the final piece.



- **Acceleration system:** This group consists of the accelerators themselves and the vulcanization reaction activators; this in order to guarantee a balanced and stable vulcanization over time.
- **Process aids:** These ingredients are used to adjust the hardness in the final product, improve the fluidity in the mold and guarantee a good dispersion of the loads in the elastomeric phase. The processing aids are soaps derived from fatty acids.
- **Pigments:** They are used to give the desired final color and these are added in oil-based dispersions in order to guarantee a better uniformity in the final color of the piece.

The adequate balance of the previous ingredients will give rise to products, in this case, toys for pets with the following physical-mechanical properties:

- High resistance to tearing,
- High resistance to cutting and propagation of this,
- High resistance to wear,
- Flexibility and elongation.

