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MINERAL FILLERS
-CLAYS-
WATER-WASHED

POLYFIL® NG

PRODUCT DESCRIPTION:

New Generation Polyfil is a water-washed kaolin clay used in elastomeric systems. It has been produced to a fine particle size and reduced particle size distribution for improved rubber reinforcement. It is an untreated kaolin. However the process and process chemicals have been optimized to allow for highly effective and efficient silane bonding to the surface of the kaolin when added during the rubber mixing process.

DEVELOPMENT PROPERTIES:

GE Brightness, min	90
pH,	8.5± 0.8
Avg. Particle Size, nanometers	350
Moisture %	1.6± 0.5

GENERAL RECOMMENDATIONS ON USE:

- Allow incorporation or partial incorporation of kaolin before introducing silane
- Silane levels, mercapto or sulfur functional silanes, to optimize tensile strength should be between 3 to 4% by weight of kaolin; for peroxide cures and using vinyl silane this should be between 2.5 to 3.2% due to the low molecular weight of the silane.
- A suitable drop temperature of the mixing stage where the silane is added to facilitate the speed of reaction is desired; initial recommendation is 155ºC but it is advised to investigate as this can be formulation dependent.
- Replacement ratio should be made by volume replacement for matching or improving tensile strength **not** PHR
    - Replace 1 PHR silica with 1.24 PHR kaolin
    - Replace 1 PHR carbon black with 1.4 PHR kaolin
- Replacement level recommendations are governed by current filler surface area and total loading.

Polyfil is a registered trade name of KaMin LLC
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