



255 Fountain Street Akron, Ohio 44304-1991  
 330-535-2100 ♦ 800-321-2260 ♦ Fax 330-535-8947

**MINERAL FILLERS**  
**-CLAYS-**  
**WATER-WASHED**

**POLYFIL<sup>®</sup> 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 155°C 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*  
 rh – 8/11 , t-Polyfil NG.doc

Included with its product literature and upon the request of its customers, Akrochem provides product specifications and evaluations, suggested formulations and recommendations and other technical assistance, both orally and in writing (collectively the "Technical Information"). Although Akrochem believes all Technical Information to be true and correct, it makes no warranty, either express or implied, as to the accuracy, completeness, or fitness of the Technical Information for any intended use, or the results which may be obtained by any person using the Technical Information. Akrochem will not be liable for any cost, loss or damage, in tort, contract or otherwise, arising from customer's use of Akrochem products or Technical Information. It is the customer's sole responsibility to test the products and any Technical Information provided to determine whether they are suitable for the customer's needs. Before working with any product, the

customer must read and become familiar with available information concerning its hazards, proper use, storage and handling, including all health, safety, and hygiene precautions recommended by the manufacturer. Nothing in the Technical Information is intended to be a recommendation to use any product, method, or process in violation of any intellectual property rights governing such product, method, or process. No license is implied or granted by Akrochem as to any such product, method, or process. AKROCHEM CORPORATION DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, RELATED TO ANY PRODUCTS OR TECHNICAL INFORMATION PROVIDED BY AKROCHEM.