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**RUBBER CHEMICALS**  
**-PEPTIZERS-**

**AKROCHEM® PEPTIZER 4P, PEPTIZER 6P**

**PRODUCT DESCRIPTION:**

Peptizers 4P and 6P are activated 2,2'-dibenzamido diphenyldisulfide (DBDD) absorbed on a clay carrier. These products are used as processing aids/viscosity reducers for natural and synthetic rubbers.

**TYPICAL PROPERTIES: 4P, 6P**

Appearance .....	grayish powder, <i>blueish pellets</i>
Specific Gravity .....	1.80, 1.63
Active DBDD.....	50%, 70%
Ash content .....	45%, 25%
Solubility.....	partially soluble in organic solvents, practically insoluble in water

**APPLICATIONS:**

Peptizers 4P and 6P are effective chemical peptizers primarily used for natural rubber. Recommended dosage levels in natural rubber are 0.05 to 0.50 phr (as final mixing temperature increases, the lower levels should be used). Synthetic rubbers require approximately 2.0 phr. By promoting chain scission during mastication, compound viscosities and dump temperatures are lowered. Also, processing, mold flow and uniformity of extruded stocks are improved. DBDD has very little effect on physical properties of vulcanizates and is acceptable per FDA CFR 21 177.2600.

Peptizer 4P and 6P disperse readily in rubber and should be added at the beginning of the mixing cycle, using either internal mixers or open mills. Viscosity reduction is most effective when the rubber and peptizer are premasticated before adding other ingredients. It is possible to eliminate the premastication step in internal mixers, where temperatures exceed 212°F/100°C, by adding carbon black, zinc oxide, stearic acid, and oils after the Peptizer 4P/6P addition. It is important, however, that sulfur, antioxidants, retarders and accelerators be added at the end of the mix cycle since they will interfere with peptization.

For styrene butadiene (SBR) it is recommended not to exceed 266°F processing temperatures to prevent possible cyclization reactions. If higher than recommended levels of Peptizer 4P/6P are used, be sure antioxidant is present in the compound to prevent unfavorable aging of vulcanizates. These products, especially Peptizer 6P, have a blueish cast and can discolor light-colored stocks (white, tans, yellows).

**CHEMICAL DISPERSIONS:**

DBDD is also available as Akroform PEP 66-80/EPR/P. This polymeric masterbatch contains 80% DBDD and has a specific gravity of 1.49. Polymer bound or encapsulated dispersions are a proven means of upgrading plant safety, efficiency, quality and raw material control.

jh 0802, peptizer 4p/6p

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