



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

RUBBER CHEMICALS
-ANTIOZONANTS-

ANTIOZONANT PD-1

DESCRIPTION:

Antiozonant PD-1 is an n-isopropyl-n'-phenyl-p-phenylene diamine (IPPD). It is recommended for use in rubber compounds as a good general purpose antiozonant with antioxidant properties. It also exhibits copper and manganese inhibitor properties.

TYPICAL PROPERTIES:

Appearance	pellets
Specific Gravity	1.07
Melting Point	75°C (167°F)
Dispersion	optimum at mixing temperatures above 200°F.

Antiozonant PD-1 is soluble in benzene, carbon tetra chloride, ethyl acetate, methylene chloride, acetone, and ethyl alcohol, but insoluble in water.

GENERAL RECOMMENDATIONS:

Antiozonant PD-1 is outstanding as an antiozonant and anti-flex cracking inhibitor at 1.0 - 3.5 phr levels in natural rubber, SBR, NBR and polybutadiene. In polychloroprene, it is effective at a lower concentration of 0.4 - 1.5 phr. Antiozonant PD-1 does discolor and stain and could exhibit a slight viscosity stiffening depending on type of carbon black used. It also activates cure systems using CBTS and MBTS.

Protection against anti-flexcracking is better than Antiozonant PD-2. For protection against oxidation and heat, it is better than Antiozonant PD-2 and highly effective in equal ratio with Antioxidant PANA. For metal deactivation, use 1:1 with synergistic metal chelator, Antioxidant 58 or 60.

gpb 6/13
T-PD-1

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.