

# CHEMICAL DISPERSIONS -MASTERBATCHES-

## AKROSPERSE® ZnO/CN-80/NBR/S

#### PRODUCT DESCRIPTION:

Akrosperse ZnO/CN-80/NBR is a polymeric dispersion of specially-treated zinc oxide. This is a high purity ZnO designed to improve scorch time in carboxylated nitriles. It can replace zinc peroxide dispersions at a much lower cost (use part-for-part on an active material basis). Typical dosage is 6.25 phr (5 phr ZnO/CN). Most zinc peroxide dispersions require 10 phr to get equal activity. As the accompanying data shows, an equal activity loading of ZnO/CN-80 gives a higher state-of-cure than ZP-1014 (zinc peroxide) which translates into higher modulus, improved abrasion resistance and lower compression set.

#### **TYPICAL PROPERTIES:**

Specific Gravity	. 2.89
Percent Active	. (ZnO/CN) 80%
Binder	. NBR
Appearance	. off-white rubber solid
Package	. 50 pound net weight cartons

#### **ADVANTAGES:**

Polymer bound or encapsulated dispersions are a proven means of upgrading plant safety, efficiency, quality & raw material control.

Akrochem polymer bound or encapsulated chemical dispersions eliminate any irritating dust, as well as other potential hazards in handling powders in the plant. The physical form is easy to handle and weigh accurately. With a dispersion, better uniformity of the mix at lower processing temperatures is possible.

### Comparison data of Struktol ZP-1014 and Kadox 911C

#### Test Formulation:

	<u>Material</u>	<u>phr</u>	<u>phr</u>	<u>phr</u>
	Krynac X7.50	100.00	100.00	100.00
	N550 Black	40.00	40.00	40.00
	DIDP Plasticizer	6.00	6.00	6.00
	Stearic Acid MC-98 Sulfur	2.00 1.25	2.00 1.25	2.00 1.25
	TMTM	1.50	1.50	1.50
	ZP-1014	10.00		
	Kadox 911C		5.00	
	ZnO/CN-80			6.25
	. ~	ZP-1014	911C	ZnO/CN
ML Scorch: (125°	(C):			
	Minimum	27.20	31.77	28.88
	$T_2$	7.50	3.90	7.13
	$T_{10}$	18.03	6.20	12.97
Rheometer: (165°	C, 3° arc):			
	Minimum, lb-in	9.0	9.0	9.0
	T <sub>2</sub> , minutes	2.6	1.6	2.8
	T <sub>90</sub> , minutes	7.2	5.6	6.8
	Max Torque, lb-in	80.0	99.5	92.0
	T <sub>90</sub> -T <sub>2</sub> minutes	4.6	4.0	4.0
Physical Properties	s: (T90 @ 165°C):			
	Hardness, Shore A	79.0	84.0	80.0
	Tensile Strength, MPa	24.6	27.6	24.6
	Elongation, %	475	395	425
	Modulus, 100%, MPa	3.6	5.4	4.3
	Modulus, 300%, MPa	13.6	19.7	15.2
	Tear, die C, kN/m	39.2	40.8	42.8
	DIN Abrasion, (mm <sup>3</sup> loss)	95.0	94.0	95.0
	Specific Gravity	1.14	1.13	1.11

page 2 of 2 gpb 01/08 t-zno cn-80 nbr

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 product 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.