



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

## CHEMICAL DISPERSIONS -MASTERBATCHES-

### AKROSPERSE<sup>®</sup> ZnO/CN-80/NBR/S

#### PRODUCT DESCRIPTION:

Akrosperser 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:***

<b><u>Material</u></b>	<b><u>phr</u></b>	<b><u>phr</u></b>	<b><u>phr</u></b>
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	2.00	2.00	2.00
MC-98 Sulfur	1.25	1.25	1.25
TMTM	1.50	1.50	1.50
ZP-1014	10.00	-----	-----
Kadox 911C	-----	5.00	-----
ZnO/CN-80	-----	-----	6.25

### ***ML Scorch: (125°C):***

	<b><u>ZP-1014</u></b>	<b><u>911C</u></b>	<b><u>ZnO/CN</u></b>
Minimum	27.20	31.77	28.88
T <sub>2</sub>	7.50	3.90	7.13
T <sub>10</sub>	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: (T<sub>90</sub> @ 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