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**ZINC PRODUCTS**  
**-SPECIALTY ZINC OXIDES-**

**ZINC OXIDE FP-CN**

**PRODUCT DESCRIPTION:**

ZnO FP-CN (E-19577) is a specially treated zinc oxide made from high purity zinc 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 5.0 phr in carboxylated formulas.

The ZnO FP-CN can also improve shelf life and scorch of ZnO-crosslinkable polymers like polychloroprene, chlorobutyl, or bromobutyl.

**TYPICAL PROPERTIES:**

Specific Gravity .....	5.57
Percent Active .....	100%
Appearance.....	off-white powder
Surface Area, m <sup>2</sup> /g.....	3.2
Median Particle Size, microns.....	0.37
Package .....	50 pound net weight bags

**CHEMICAL DISPERSIONS:**

ZnO FP-CN is also available as Akroperse<sup>®</sup> ZnO/CN-80/NBR. This polymeric masterbatch contains 80% ZnO FP-CN and has a specific gravity of 2.89. Polymer bound or encapsulated dispersions are a proven means of upgrading plant safety, efficiency, quality and raw material control.

**COMPARISON TO STRUKTOL ZP-1014 AND KADOX 911C:**

**Test Formulation:**

<u>Chemical</u>	<u>phr</u>
Krynac X7.50	100.00
N550 Black	40.00
DIDP Plasticizer	6.00
Stearic acid	2.00
MC-98 Sulfur	1.25
<u>TMTM</u>	<u>1.50</u>
Total	150.75

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	<u>ZP-1014</u>	<u>Kadox 911C</u>	<u>ZnO FP-CN</u>
Test Formulation	150.75	150.75	150.75
Struktol ZP-1014	10.00	---	---
Kadox 911C	---	5.00	---
Akrochem ZnO FP-CN	---	---	5.00
ML Scorch @ 125°C			
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 - Micro die, 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

**Typical Physical Properties:** (cured to T<sub>90</sub> @ 165°C)

Hardness, Shore A	79	84	80
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 Loss, (mm <sup>3</sup> )	95.0	94.0	95.0
Specific Gravity	1.14	1.13	1.13