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Technical Data

VANOX[®] ZMTI Slurry
An Antioxidant Synergist
In Natural Rubber Latex

With Phenolic Antioxidants

R.T. Vanderbilt Company, Inc.
30 Winfield Street, P.O. Box 5150, Norwalk, CT 06856-5150
Telephone: (203) 853-1400
Fax: (203) 853-1452, Web Site: www.rtvanderbilt.com

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VANOX® ZMTI Slurry
An Antioxidant Synergist
In Natural Rubber Latex

With Phenolic Antioxidants

Because of their non-staining characteristic, phenolic antioxidants are largely used in the manufacture of latex gloves, thread and medical sundries, even though their oxidative protection is less than that of amines. **VANOX ZMTI** significantly improves the heat resistance and aging performance of latex films with phenolic antioxidants, thereby protecting them to the same degree as amines, without staining.

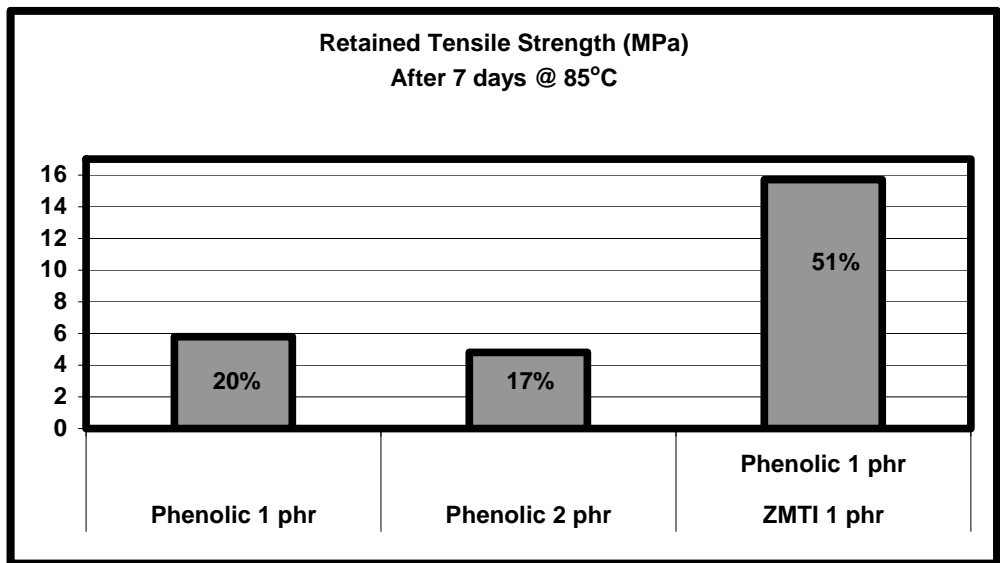
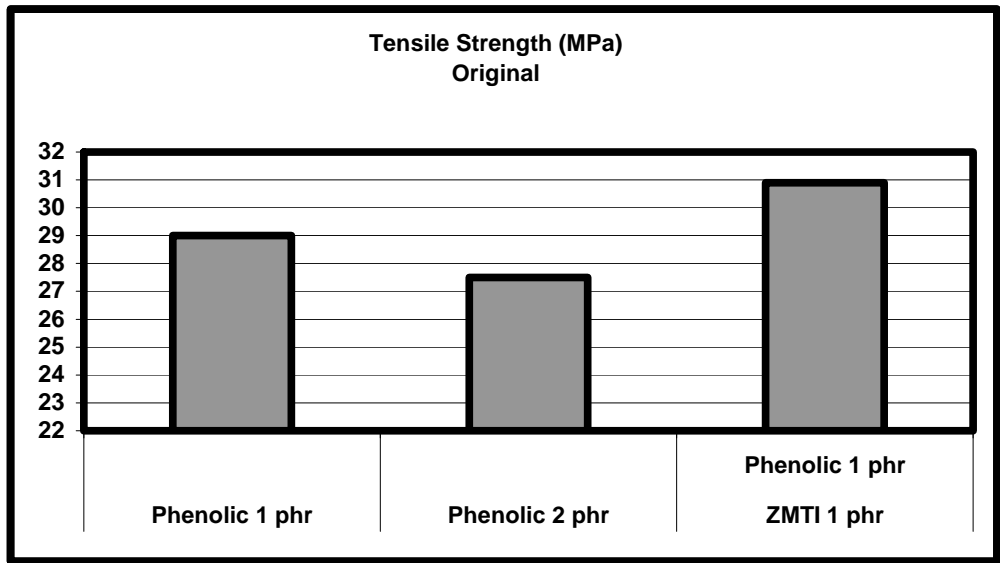
Heat age testing for the purpose of establishing expiration dates on latex products is generally done at 70°C for 7 days. These tepid conditions are virtually nondiscriminatory. It is not unusual for poorly protected products to pass the test. Testing at 85°C for 7 days better demonstrates the increased protection offered by **VANOX ZMTI**. More than half of the original tensile strength is retained when the antioxidant synergist is included in the compound, while only 20% or less is retained when using the phenolic antioxidant alone. Doubling the level of phenolic antioxidant from 1 phr to 2 phr does not improve the performance.

VANOX ZMTI Slurry is available as a 50% active dispersion with exceptional anti-settling characteristics.

Test Compound

<u>INGREDIENTS:</u>	<u>DRY</u>	<u>WET</u>
62% High Ammonia Natural Rubber Latex	100	161
DARVAN® WAQ Surfactant	1	3
60% ZINC OXIDE Dispersion	0.5	0.83
50% Sulfur Dispersion	0.5	1
SETSIT® 9 Accelerator	---	1.5
DARVAN SMO Surfactant	1	3
<u>Variables</u>		
50% Amine, Antioxidant	X	2X
50% VANOX ZMTI Slurry and Phenolic Antioxidant	X	2X

The compounds were cured for 20 minutes at 100°C.



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