



**Vanderbilt Chemicals, LLC**

A Wholly Owned Subsidiary of R.T. Vanderbilt Holding Company, Inc.




**RUBBER**

# Antioxidant Guide

# ANTIOXIDANT SELECTION GUIDE FOR RUBBER

The selection of the correct antioxidant system is extremely important in optimizing the physical properties of the finished product and in ensuring that your rubber compound is able to withstand stresses and strains, including heat and oxygen aging. The enclosed Antioxidant Selection Guide will help in the selection of an appropriate antioxidant for your specific application. The correct antioxidant package can help to limit, and possibly eliminate, the damaging effects of stresses and strains on the performance of the product.

The antioxidants and antioxidant synergists supplied by Vanderbilt Chemicals will greatly improve the heat and oxidative resistance of your compounds and help with the retention of its original physical properties.



PROPERTIES								
Trademark	Form	Melting Temp., °C	Non-bloom Dosage, phr	Discoloration	Staining	Inhibits Oxygen Attack	Improves Heat Aging	Inhibits Flex Crackling
AMINE ANTIOXIDANTS								
AGERITE® ODPa	powder	85 min.	2.0+	no	no	E	E	F
AGERITE SUPERFLEX® SOLID G	powder	75-90	2.0+	br	st	E	E	E
VANOX® CDPA	powder	98-102	2.0+	sl	sl	E	E	E
HYDROQUINOLINE ANTIOXIDANTS								
AGERITE TMQ	past/p*	82-102	2.0+	sl	sl	E	E	F
AGERITE TMQ ULTRA	past/p*	115-135	2.0+	sl	sl	E	E	F
PHENOLIC ANTIOXIDANTS								
SONGNOX® 1010	powder	110-125	—	no	no	E	E	P
SONGNOX 1024	powder	221-232	—	no	no	G	G	P
SONGNOX 1076	powder	50-55	—	no	no	G	G	P
SONGNOX 1135	liquid	—	2.0+	no	no	G	G	P
SONGNOX 1330	powder	241-247	1.0	no	no	G	G	P
SONGNOX 2450	powder	76-80	2.0+	no	no	G	G	P
SONGNOX 3114	powder	218-223	2.0+	no	no	F	E	P
VANOX MBPC	powder	124-130	2.0+	no	no	E	G	P
OTHER								
BUTYL ZIMATE®	powder	103-110	2.0+	no	no	G	E	P
SONGNOX 1680*	powder	181-187	—	no	no	E	E	G
SONGNOX DLTDp*	powder	38-41	—	no	no	E	E	—
SONGNOX DSTDP*	powder	63.5-68.5	—	no	no	E	E	—
VANOX MTI*	powder	250 min.	2.0+	no	no	E	E	—
VANOX NDBC	powder	86 min.	1.0	gr	no	F	E	P
VANOX ZMTI*	powder	300 min.	2.0+	no	no	E	E	E

\*Normally used as synergist with other antioxidants, rating refers to combination.  
\*\*Complies with 21 CFR Part 177.2600, Rubber Articles for Repeated Use (in Contact with Food) and/or 21 CFR Part 178.2010 Antioxidants and/or Stabilizers for Polymers  
sl = slight; st = staining; br = brown; gr = green; gy = gray; E = excellent; G = good; F = fair; P = poor; X = recommended

APPLICATIONS									
Polymer Stabilizer	Tires	Hose & Belts	Automotive & Appliance Molded Goods	Wire & Cable	Footware	Adhesives & Cements	Hot Melts	Latex	FDA Listed***
X		X	X	X	X	X	X	X	X
	X		X	X		X			X
	X	X	X	X	X	X	X		
				X		X	X	X	
	X	X	X	X	X	X		X	
X				X	X	X	X	X	X
		X		X		X	X		X
X		X		X		X	X	X	X
X			X		X	X			
X	X		X			X	X		
							X	X	X
X		X			X	X	X	X	X
X				X		X	X		X
									X
									X
	X	X	X	X	X	X	X	X	
	X	X	X				X		
	X	X	X	X	X	X	X	X	

- Please contact Vanderbilt Chemicals for additional information on the products listed in this brochure.
- Samples and technical information are available on request.
- For a complete listing of Vanderbilt Chemicals products, please visit: [www.vanderbiltchemicals.com](http://www.vanderbiltchemicals.com)

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